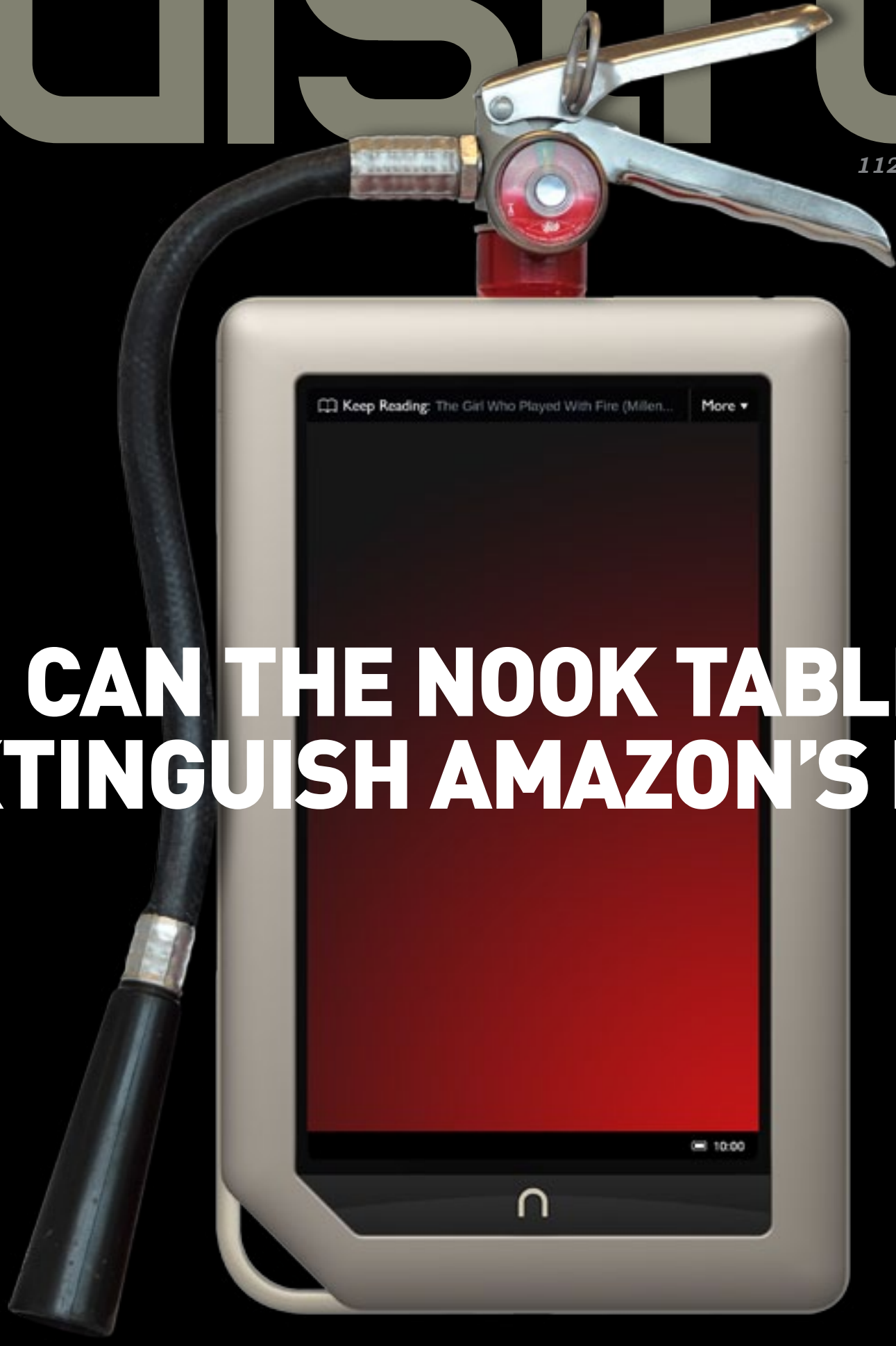


# engadget<sup>®</sup> distro

112511 #15



## CAN THE NOOK TABLET EXTINGUISH AMAZON'S FIRE?

**Get the Skinny**  
On Toshiba's  
Portege Z835

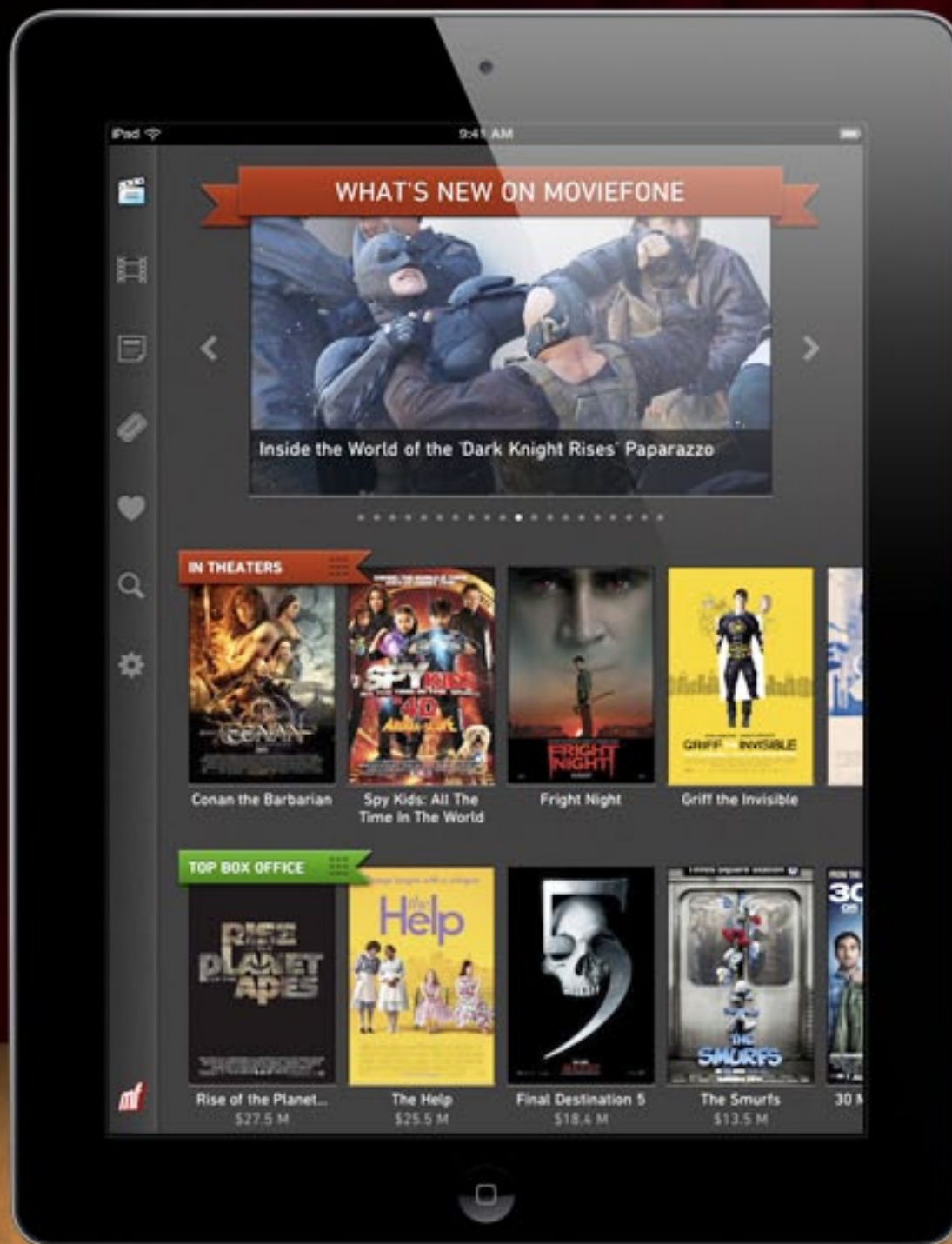
**Galaxy Tab 7.0 Plus**  
Can it Live Up to its  
Name?

**HTC's Rezound**  
A Sleeper Success?

**Read it Here First**  
Ross Rubin's  
Switched On

ADVERTISEMENT

# moviefone



## Now Showing On iPad

The best way to find showtimes, watch trailers, see exclusive clips and more.

Free Download 

 Available on the  
**App Store**

# Content is king and the Nook Tablet gets rooted

*editor's letter*

**It's a holiday week, at least in America, where seemingly half of the able-bodied workforce cashed in a few vay kay days and decided to take the full week off. Whether or not they chose to spend that time occupying some capitalistic enterprise or simply reclining on an overstuffed couch, it made for something of a slow news week, relative to all the noise in the past few months.**

There was, however, plenty to do about content this week. We'll start with the bad news: ST Holdings ordered all of its 200 record labels off of popular streaming services, including Rdio, Simify, Napster and, my personal favorite, Spotify. This came after a report from NPD Group showing subscribers of such services are less likely to go out and buy music in more traditional means — a factoid that will come as no surprise to actual users of said services. The big labels are still playing ball, but this is definitely a bad sign.

In much, much better news, Netflix and Fox announced a partnership to bring *Arrested Development* back for another



season in 2013. I confess to being a little late to this party in the first place — I wasn't turned on to the series until after it had already been canceled — but I can't wait to see what crazy hijinks are next for the Bluth family. Perhaps this season they'll finally realize their father is actually Hank Kingsley.

For a final dose of great content, one of my favorite iOS

games, *Tiny Tower*, has finally built enough floors to make it to the level of Android. It's free in the Android Market now and comes chock full of Bitizens.

Moving on to hardware, we got a peak at another delicious tablet from Lenovo, this one sized at just 5-inches. That's half the spread of the 10.1-incher we peeked at a few weeks ago and, while we don't know what resolution this little guy will be pumping out, Lenovo hopes it'll find more success than the rather poorly received Dell Slate 5 that came before. It remains to be seen whether it will follow in the footsteps of Dell's tablet by being able to make phone calls, but the presence of an earpiece means it's keeping an open mind.

Samsung has rolled out the Galaxy Tab 10.1N in Germany, satisfying a court ruling that said it was just a *little* too familiar for iPad users. The new tablet features a slightly wider, now-metal bezel that has the speakers pointing



front-and-center rather than to the sides as on the current Tab. So, the slight increase in width might make for some speakers that can actually be heard in a noisy room. The company also fixed what was ailing current 10.1 users who had updated to Android 3.2, with a second Honeycomb-flavored update exorcising a number of glitches the prior update had caused.

iOS 5 users are also reporting issues, updated tablets, phones and media players losing signal strength and struggling to stay connected to WiFi. Apple did push an update recently (5.0.1) but, sadly, that doesn't appear to solve the problems.


The Barnes & Noble Nook Tablet got its first good rooting, opening the door for what will surely be a series of spectacular hacks—at least, that's what we're expecting after what everyone has done with its predecessor, the Nook Color. Meanwhile the Kindle Fire is also proving to be quite hackable, and we at Engadget all love a good, cheap, hackable slate.

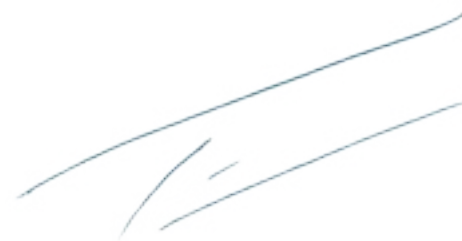
Nintendo is releasing a special edition of the 3DS, featuring a trifoce-infused design. The black and gold release is here to celebrate the launch of *The Legend of Zelda: The Ocarina of Time 3D* and is quite natu-

**... Google itself wasn't so kind with a number of its own creations including Wave, Knol and Friend Connect. All are, at this point, dead services walking.**

rally bundled with that game, selling for \$200. If you're more of a Mario fan you can get a red rendition, celebrating *Super Mario 3D Land*. And, if you already own a 3DS, you're welcome to sigh longingly, as I will be doing.

Finally, Flash on mobile devices got a bit of a stay of execution, with Adobe indicating an Ice Cream Sandwich version will be created to ensure that Google's latest OS can still render all sorts of banner ads with aplomb. But, Google itself wasn't so kind with a number of its own creations including Wave, Knol and Friend Connect. All are, at this point, dead services walking.

This week's Distro is very much alive, featuring a review of HTC's latest superphone, the Rezound. We'll also look at Toshiba's incredibly light Portege Z835 Ultrabook, Samsung's Galaxy Tab 7.0 Plus and Barnes & Noble's Nook Tablet. We have another edition of IRL and, finally, Ross Rubin explores HTC's journey back to the future. So, make yourself another turkey sandwich and dig in. 



TIM STEVENS  
EDITOR-IN-CHIEF,  
ENGADGET

---

*Send your letters to the editor with your name, city and state or country to [distroletters@engadget.com](mailto:distroletters@engadget.com).*

**This way in**



REVIEW

## **Samsung Galaxy Tab 7.0 Plus**

BY TIM STEVENS

EDITOR'S LETTER

## **Content is King and the Nook Tablet Gets Rooted**

BY TIM STEVENS



REVIEW

## **HTC Rezound**

BY BRAD MOLEN



IN REAL LIFE

## **Verizon SCH-LC11 LTE Hotspot, Sennheiser CXC 700 Headphones and the Xperia Arc**

BY ENGADGET STAFF



SWITCHED ON

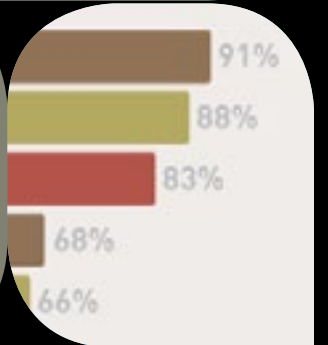
## **HTC Goes Back to the Feature**

BY ROSS RUBIN

LAST WORD

## **Ill Conceived Twitter Parody Accounts**

BY BOX BROWN



REVIEW

## **Toshiba Portege Z835**

BY DANA WOLLMAN



STATS

## **Developers Warm to Windows Phone, Give BlackBerry the Cold Shoulder**

BY ZACHARY LUTZ

REVIEW

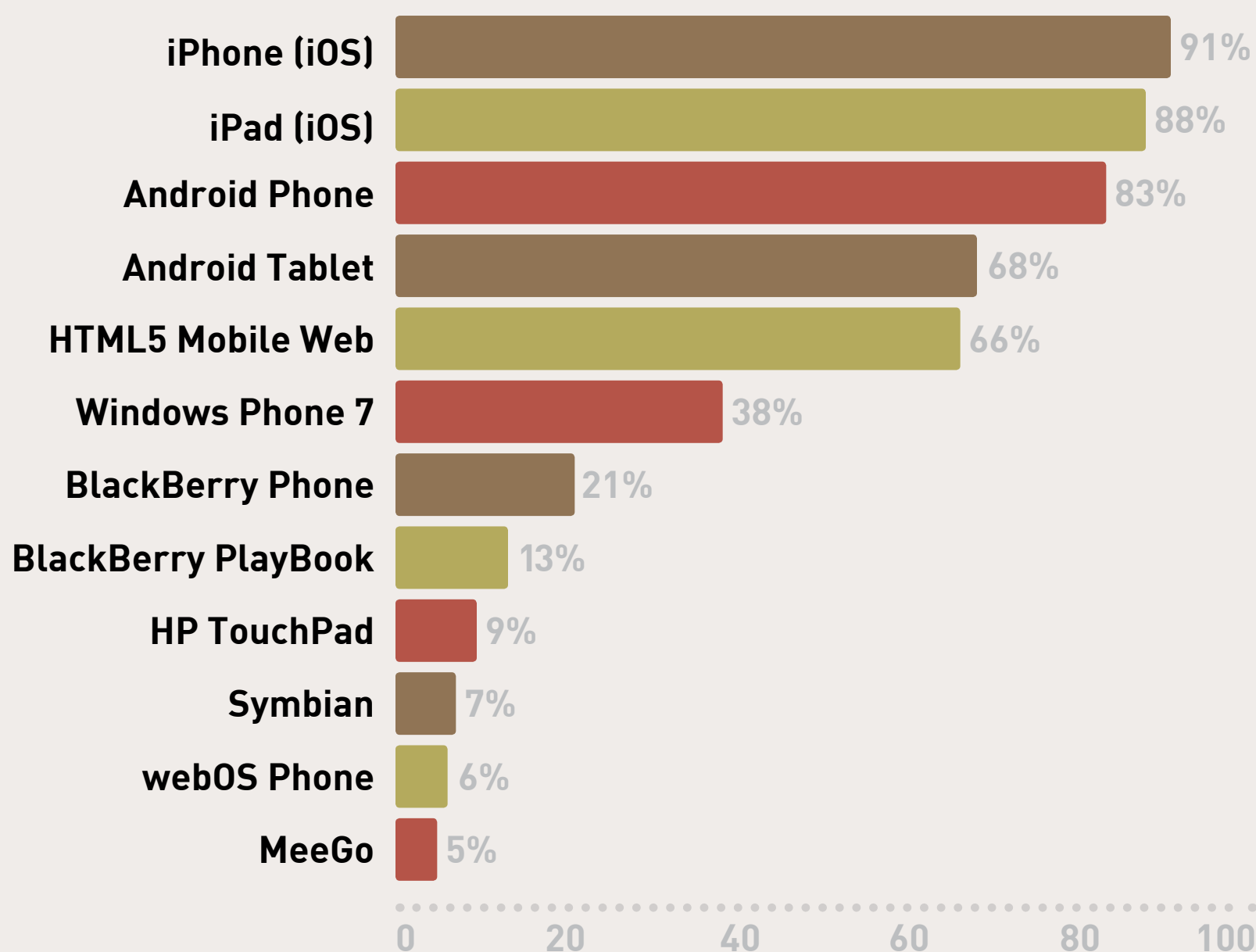
## **Barnes & Noble Nook Tablet**

BY BRIAN HEATER



COVER PHOTO: WILL LIPMAN

## 'VERY INTERESTED' IN DEVELOPING FOR EACH PLATFORM



## Appcelerator developers warm to Windows Phone, give BlackBerry the cold shoulder

It seems that developer sentiments have shifted since we last checked in with Appcelerator and its opinionated community of coders. In a survey performed in conjunction with IDC, the results suggest a steady interest to develop for smartphones and tablets of the iOS and Android variety, but also reveal a punctuated surge in enthusiasm for Windows Phone. The platform experienced an eight percent uptick since last quarter, with developers citing Nokia's involvement as a primary motivating factor. While Microsoft's OS still lags behind the front-runners, it has significantly separated itself from other competitors. For instance, interest in BlackBerry smartphones fell by seven percent, to roughly half that of Windows Phone. While the 2,160 survey respondents may not perfectly represent reality, we wouldn't be surprised if they were darn close. — Zachary Lutz

**DISTRO  
EXCLUSIVE  
READ IT HERE  
FIRST**

# HTC GOES BACK TO THE FEATURE

**SWITCHED ON**



**BY ROSS RUBIN**

---

*Ross Rubin (@rossrubin)  
is executive director and  
principal analyst of the  
NPD Connected Intelligence  
service at The NPD Group.  
Views expressed in Switched  
On are his own.*

Motorola's DROID RAZR takes enough pages out of the classic textbook of smartphone differentiation to assemble its own chapter. It sets a new standard for thinness in LTE devices, uses leading-edge display technology, resists flexing, glass breakage and water damage, has a striking design and thoughtfully selected materials, stretches battery life, matches with a bevy of optimized accessories, and enables remote file and media access via Motocast software. Who's it for? Just about any Verizon customer willing to pony up.

Its rival, HTC, has also long played the one-upmanship game. It has invested in a software layer designed for populist appeal. Moreover, it has catered to U.S. carriers' by being first out of the gate to support T-Mobile's 3G network (with the first Android phone, the G1) and Sprint's and Verizon's 4G efforts, as well as one of two to initially support AT&T's LTE network.

And the work has paid off. At its recent introduction of the Rezound, the company crowed that it had been named the best-selling smartphone brand in the U.S. in Q3, and that it was the leader in 4G smartphones. (The NPD Group,

my employer, supports the second claim but not the first.) HTC also noted that it had cracked the Interbrand 100 list of best global brands after only five years of promotion. The company's "partner," Beats Audio, in which the handset maker has invested hundreds of millions of dollars, also drenched its benefactor in praise. This was followed by expected statements of support from Verizon and Best Buy, which will sell the Rezound.

HTC may thus be losing the battle to be "quietly brilliant." However, one aspect of its marketing campaign on which it seems to be over-delivering is the focus on




# ...Like all retro phenomena, the nod to the past does not exactly recapture it.

“you,” a word that merited its own slide early in the Rezound’s unveiling. Unlike the tour de force of the DROID RAZR, the Rezound is the second recent HTC smartphone to have a loosely defined, yet thoughtfully targeted user or specialty. Whereas the plum-coated HTC Rhyme was aimed toward fashion-forward consumers looking for a lifestyle-management handset, the Rezound — with its Beats Audio tuning, bundled Beats headphones and hi-definition display — is focusing on a multimedia entertainment experience, one clearly anchored in music.

In some ways, this approach recalls the heyday of feature phones, ironic given that HTC has the least history in those devices among major smartphone OS licensees. In contrast, Sony Ericsson, for example, long emphasized “imaging phones,” borrowing the Cyber-shot brand and “music phones” with the Walkman label. Smartphones raised the bar for these and many more tasks, apparently rendering such focus irrelevant since apps could make any smart-

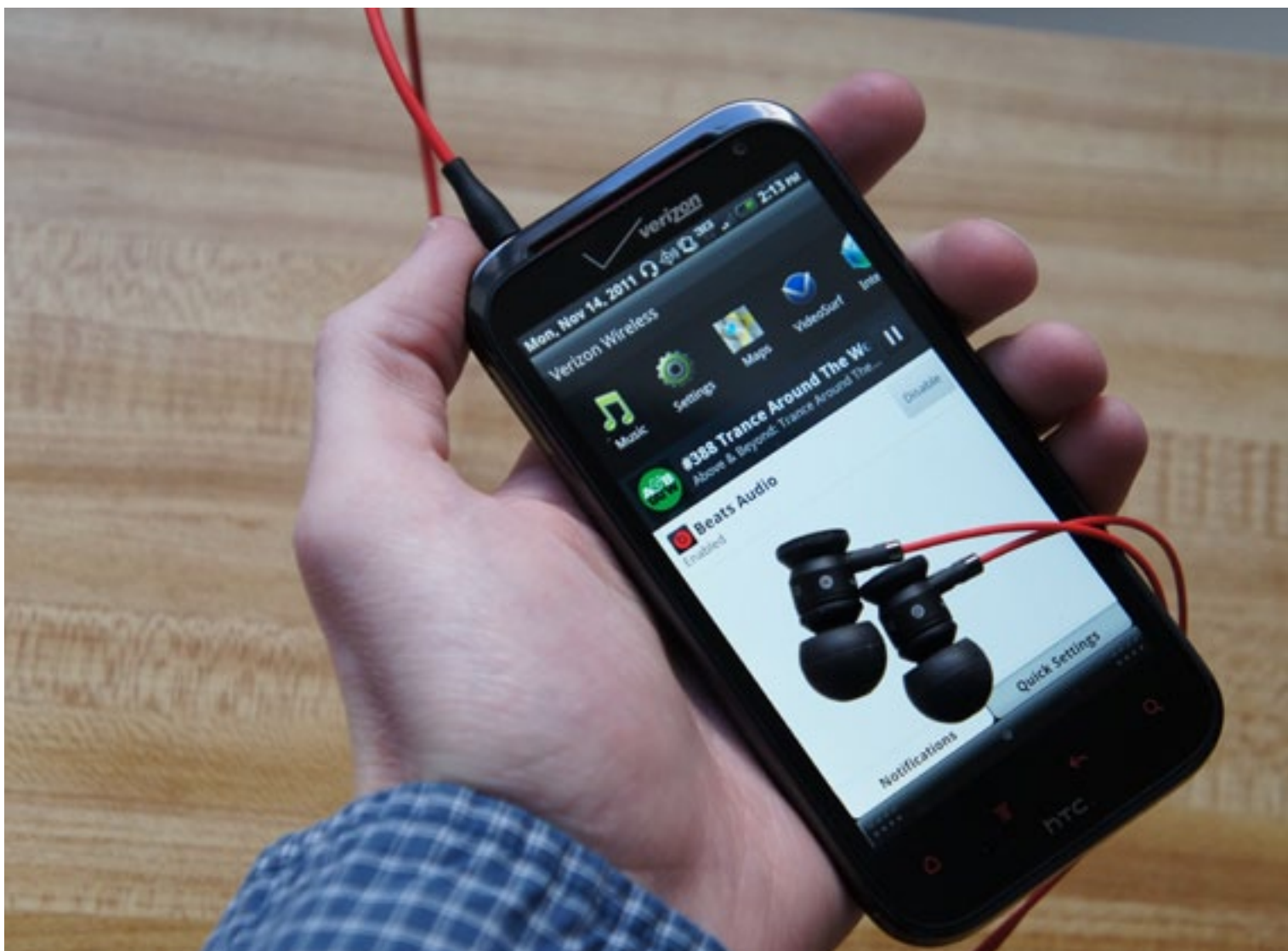
phone a capable jack-of-many-trades.

But like all retro phenomena, the nod to the past does not exactly recapture it. HTC’s approach is not strictly defined by features. Even the music-centric Rezound has continued an emphasis on higher-quality imaging features, recently extolled by Apple and Nokia. The targeted smartphone is more about persuasion than purpose, with HTC’s crafted customers a hybrid of specific demographics, behaviors and personality.

HTC’s tailoring may not be noticed or appreciated by its intended audience and, in any case, two phones do not a strategy make. Yet, as smartphone saturation continues to grow in the U.S. and app libraries clear a baseline of selection and quality, many of these devices have become rungs of specifications in manufacturers’ chosen ladders of operating systems. In an age when more people than ever can afford a smartphone, new opportunities may lie in recognizing that it’s no longer just about how much smartphone one can afford. 

**SWITCHED ON**





*review*

# HTC Rezound

BY BRAD MOLEN

**The Motorola RAZR** and Samsung Galaxy Nexus seem to be the two Verizon LTE juggernauts enjoying the lion's share of the spotlight, with the HTC Rezound sandwiched smack dab between the two of them. But that doesn't mean the device has any less to offer — you might even say it's entitled to some bragging rights. It's not the thinnest phone, nor does it have Ice Cream Sandwich (yet), but being the first carrier-branded handset in the US boasting a 720p HD display should

carry a lot of weight. The Rezound — as you might have gathered from the name — is also the first HTC gizmo in the States to integrate Beats Audio. So does it fare well against its LTE competition? Is it enough to take your mind off of the Nexus? Read on to find out.

## Hardware

Make no mistake: the HTC Rezound is brimming with goodies. A quick glance at the spec sheet makes this perfectly clear, since the phone offers a 1.5GHz



dual-core Qualcomm MSM8660 CPU, Adreno 220 GPU, 1GB of RAM, an 8 megapixel rear camera with 1080p video capture and a 2 megapixel front-facing cam, 16GB of internal storage (10 of which are user-accessible) and an included 16GB microSD card. Last and definitely not least, it's the first carrier-branded phone in the US with a 720p HD display and integrated Beats Audio — in fact, it comes with a pair of \$100 iBeats included in the box (the irony of the name of the headphones isn't lost on us). To sum up, it ain't your run-of-the-mill HTC phone.

With the majority of attention pointed directly at the upcoming Samsung Galaxy Nexus, it's easy for any other high-end smartphone to get lost in the fanfare. The HTC Rezound is a victim of this very scenario, even though its overall features are quite competitive. The successor to the Thunderbolt, this is the Taiwanese maker's second appearance in Verizon's LTE lineup — which in the past month has suddenly exploded to nearly double the options.

In overall dimensions, the Rezound doesn't hold a candle to the Droid RAZR. The former, measuring 13.7mm thick, is nearly *double* that of the lat-

ter's 7.1mm; even with its depth, the Rezound's still at least thinner than the 14mm Thunderbolt. We're a bit curious as to how HTC's making use of the extra space, since the vast majority of second-gen LTE phones are much thinner than the first — even the 12mm Droid Charge and 13mm LG Revolution, both of which could be considered first-generation, are thinner than the Rezound. It's also hefty, weighing in at 5.78 ounces (164g), which, as you'd expect, is significantly heavier than the RAZR's 4.5 ounces (127g).

Despite the heft, we were surprised to find that it actually fits snugly in our hands, likely because most of the thickness is tapered towards the middle, giving it more of a convex build (its 4.3-inch screen size certainly doesn't hurt either). The soft touch plastic on the battery cover not only adds to the comfort level by making it more grippable, it also keeps the Rezound from picking up fingerprints easily. Unfortunately, the phone's surfaces work no such magic against greasy hands. Eat pizza near the Rezound at your own risk.

Upon looking at the back of the device, we were immediately reminded of the Incredible series. In reality, it's more of

# ... With a resolution of 1280 x 720 on a 4.3-inch screen, the Rezound offers a mind-boggling 342ppi.

a hybrid, mimicking a Droid Incredible 2 with its contours on top that gradually disappear as you continue down the phone's back and eventually merge into a gentle slope that's reminiscent of the bottom of the Vivid. At the crest of these contours, HTC's wisely added a series of textured ridges that offer a touch more friction to the end of your fingertips, which is just another measure to prevent the phone from slipping out of your hands.

The Rezound tries to maintain a wholly minimalist approach in button / port placement. On the left side you'll notice the micro-USB compatible MHL socket near the bottom and secondary noise-cancelling mic closer to the top; the main mic can be found on the bottom of the phone. Drifting right, a volume rocker is found by its lonesome, with no dedicated shutter button to keep it company; the rocker's sunken pretty deep into the side of the phone, making it slightly more difficult to crank up the Beats. Topside is your destination for the power / lock button and a 3.5mm jack for those red headphones in the box that are calling your name.

## Display

The HTC Rezound may be the first US

carrier-branded device to offer a true HD display, but it's certainly not the first in the world. We've already seen the Samsung Galaxy S II HD, Galaxy Note and LG Optimus LTE, and the Galaxy Nexus will hit the market soon enough as well. Indeed, our choices are about to get pretty crowded here, and we're definitely not complaining about it.

At first glance, the 1280 x 720 Super LCD panel on the Rezound may not seem that much better than the qHD found on the HTC Vivid, or even the Super AMOLED Plus on the Samsung Galaxy S II series — a screen that continues to impress despite its WVGA resolution. But it's all about the tiny details here: when we looked closer at the Rezound and compared its screen quality with that of the aforementioned devices, we began to see the little things that show the actual worth of having high resolution.

The proof is in the ppi — the number of pixels per inch, also known as pixel density. We'll calculate it out here: with a resolution of 1280 x 720 on a 4.3-inch screen, the Rezound offers a mind-boggling 342ppi. From what we can tell, it tops the charts — the Retina Display found on the iPhone 4 and 4S is no longer tied for first with the LG Optimus



LTE. And not only does the Rezound beat the iPhone's display soundly, it does so with a larger screen size. Rivals such as the Vivid and Droid RAZR are left in the dust, the latter getting beat out by a healthy 86ppi and the former by even more.

Impressed yet? Let's kick another nugget your direction. This gorgeous display makes this achievement while using a standard RGB matrix configuration; unlike the Galaxy Nexus, no Pen-Tile setup is to be found on the Rezound. Granted, with such a high pixel density, we doubt that tidbit really matters as much as it would on, say, a qHD panel (like the one on the Motorola Droid RAZR, for instance). But it still enables the true high-def resolution to fully shine, and we appreciate the fact that HTC went the extra mile here.

Of course, such high pixel density means that you won't be able to see pixelation with the naked eye, and it's obvious with the Rezound's display. Watching an HD-quality video, as expected, is absolutely stunning; everything appears more life-like, and it's easier to see finer details such as freckles and little hairs. Text turns out incredibly crisp, and it's the most noticeable with smaller fonts; when viewing Engadget, for instance, tiny print appears just as smooth as it does when we zoom in. It's a more satisfying visual experience than seen on the Vivid, which shows more and more jagged edges as the text gets smaller.

Having the opportunity to enjoy 720p resolution on a smallish screen was



lovely. The colors seemed to glow with just the right amount of saturation and the screen was viewable in direct sunlight (albeit, only under its brightest setting). The viewing angles were not as good on the Super LCD panel as they were on the Super AMOLED Plus, but we still managed to at least see everything clearly enough when viewing the phone from its side. Should we be excited about the influx of phones that offer such a high resolution? Absolutely.

## Camera

The Rezound uses the same 8 megapixel f/2.2 BSI sensor, dual LED flash and 28mm wide-angle lens as the Vivid and Titan, and just like on the other devices, it holds its own here. The camera UI brings memories of the Sensation 4G and makes it easy to find everything





sample  
images





we need, offering a full menu of options on the sidebar (as well as an effects icon hidden in the top corner). The camera employs continuous autofocus, so as to make sure it's ready to snap a shot at a moment's notice. It also offers touch to focus, so you can find different objects within the viewfinder to focus on. Sadly, there's no two-stage hardware shutter button on the Rezound, and a long-press of the virtual shutter only tells the camera to focus before automatically taking the picture — it unfortunately doesn't lock in the focus and / or exposure as we've seen on the Galaxy S II.

We enjoyed seeing the extensive variety of features available on the Rezound. ISO, effects, face detection, white balance, exposure / contrast as well as saturation and sharpness adjustments are all present, all of which are important because they give you much greater control of everything your camera has to offer, letting you make the most of each shot.

There's also a panorama mode similar to the myTouch 4G Slide's Sweep-Shot, which only stitches together a small number of images but offers a shorter pic with much higher resolution than what you'd find in most six-shot panorama pictures. Backlight HDR is another one of our favorite modes because it has the ability to take most poor-lit scenarios and grab more errant light from the high dynamic range for the image (admittedly at the expense of some detail). Close-up is the device's macro focus setting, giving the user the

ability to take a well-detailed image while just a couple inches away from an object. Lowlight mode also comes in handy, but we found that HDR works better at capturing backlight; the decision on which one to use will mainly depend on how poorly-lit the object is and how much detail you're willing to sacrifice to get the amount of light you desire. Finally, Action is a shutter priority mode that works great for capturing moving objects.

As we briefly touched upon, the camera fared the worst in low light, but using HDR definitely had a beneficial impact on evening shots as well as pictures taken in the shade. In the instances where this feature was necessary, we weren't too concerned about losing a little bit of detail, since we likely wouldn't have it with the poor lighting anyway. We were impressed by the shots we were able to take at full zoom, and our noonday pictures outside resulted in above-average color and detail. Overall, the software and features are top-notch, and we were satisfied with the shots we took, but we still prefer the image quality on the myTouch 4G Slide and the Galaxy S II series.

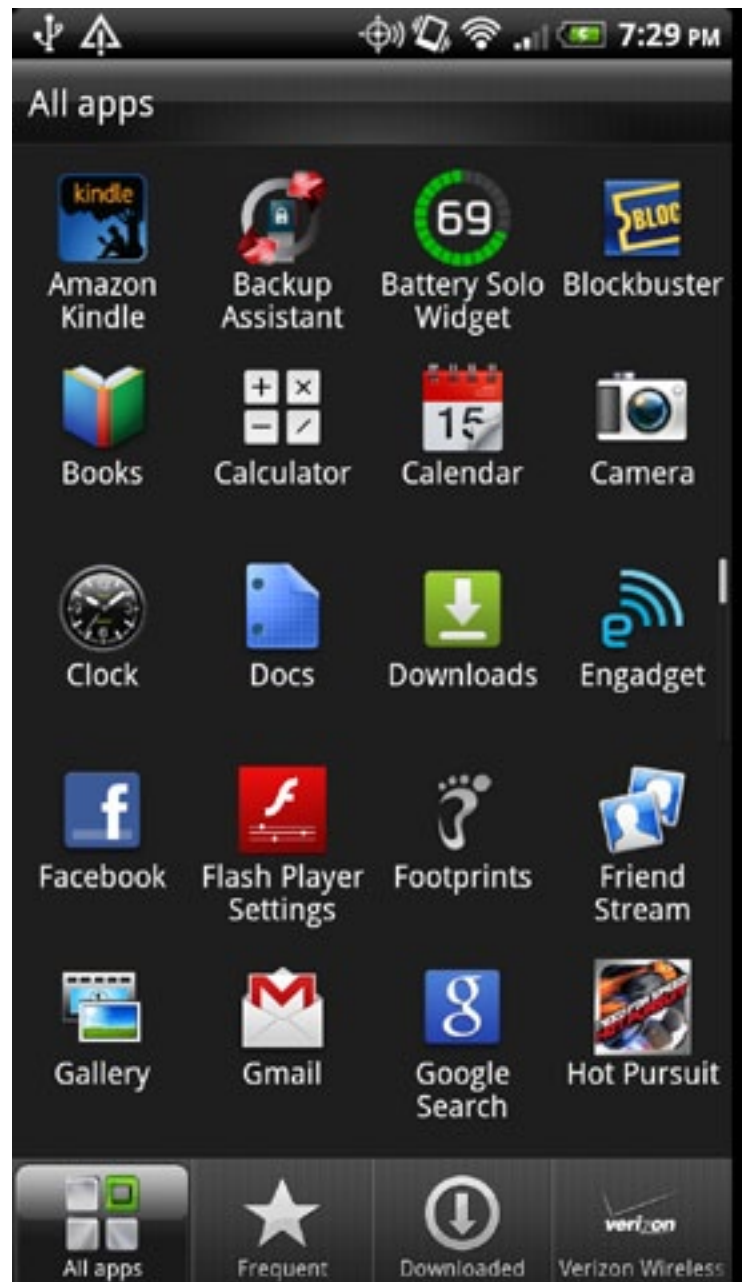
The Rezound captures video at a maximum resolution of 1080p at 30fps. In most scenarios, the footage we recorded was smooth and our voice came out loud and clear. We specify that this is the case in most scenarios, but not all: 1080p video capture turned out okay when our target was either stationary or moving slowly, but it had an issue keep-

ing up with faster subjects like cars. 720p capture, on the other hand, didn't offer any problems with moving objects, though as expected it didn't pick up as much detail. Speaking of which, 720p is enabled on the front-facing video cam, a feature we've already seen in the Vivid but enjoy seeing here as well.

Like the Rhyme and Sensation XL, it throws in the option to record in 2x slow motion. How is this done? By capturing the video at 60fps and slowing it down to 30fps. It maintains the same frame rate as the normal mode so it appears just as smooth. As a disclaimer, this mode can only be used to capture 720p and doesn't allow audio; our juvenile selves were a bit disappointed we couldn't have a little fun listening to our voices run at half the speed.

## Software

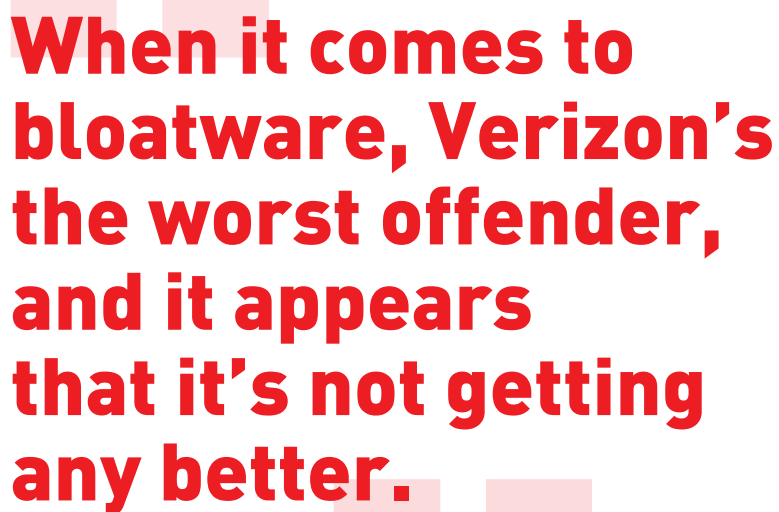
The Rezound comes with Android 2.3.4 installed, but you probably won't notice it since it's buried underneath the thick skin of HTC Sense 3.5, the latest version of the OEM's proprietary UI. This is only the second device in the US to offer it, with the HTC Rhyme as its predecessor. 'Course, despite the fact that these two phones are running on the same version of Sense, they don't really look that much alike. The Rezound exhibits more of the traditional interface elements, electing to revert back to the same bar at the bottom which gives you the non-customizable choices of app menu, phone app and personalization options (which, by the way, is a



perfectly good waste of space when considering you can access this panel by long-pressing the screen or simply tapping on the menu button), rather than the Rhyme's two small icons hiding in its bottom corners. The signature clock is also back by default — after all, who wouldn't miss the HTC clock if it was banished?

There aren't a whole lot of drool-inducing enhancements in Sense 3.5 that would make you want to go out and root your old phone just to get it. For one, you can get rid of home screen panels now, which is nice if you're anti-clutter; the slow-motion video capture mode mentioned above is also exclusive to 3.5. And lest we forget, HTC and Dropbox

have struck a deal which offers 5GB of free cloud storage on the service (by the way, that's 5GB *total*, not additional to the 2GB that's already included) to any device using the latest version of Sense. Aside from this, any real changes are so minor they aren't worth covering in any extreme detail here.



**When it comes to bloatware, Verizon's the worst offender, and it appears that it's not getting any better.**

Of course, it wouldn't be a complete review of the device's software without making mention of the pre-installed apps on the Rezound. Being a Verizon-branded handset, it probably won't take too much guessing for you to figure out how much is on here — it's *saturated* with it. Unlike the Rhyme, Big Red left its proprietary tab at the bottom of the app tray to highlight its vast collection of bloatware. Don't worry, you can still find every last one in the main tab just in case.

So what's on the list this go-round? Among others, we'll start off with Blockbuster, Mobile IM, VCAST music

and video, My Verizon Mobile, Polaris Office, Slacker and VZ Navigator (someday carriers will acknowledge the presence of Google Maps and Navigation). Throw in a bunch of games and other programs meant to showcase the phone's high-end dual-core CPU with the HD display, like *NFS: Hot Pursuit* and *Let's Golf 2*, and the recipe of crapware perfection's complete. And we know you're curious about how many of these glorious space-suckers are uninstallable: none of them. Not a single one. Zilch. Oh, and it gets better — unlike TouchWiz 4.0, the Sense UI doesn't have any ability to store these eyesores into folders, nor can it even filter them into categories for easier organization. You're stuck with 'em through thick and thin. The only alternative is to use the frequent tab in the app tray to filter down to only those apps you use often. When it comes to bloatware, Verizon's the worst offender, and it appears that it's not getting any better.

Also, here's a breath of fresh air that we didn't see with the AT&T LTE-enabled phones: a homegrown option to turn the 4G service off if you'd rather have better battery life than faster downloads. It's still buried in the settings menu (under Wireless & Networks < Mobile Networks < Network mode), so you'll want to hunt down a handy widget in the Android Market if you'd prefer to have a faster access point.

It's also important to note that while the Rezound currently sports Android 2.3.4, HTC decreed that it's destined and



ready to receive an upgrade to Android 4.0 — also known as Ice Cream Sandwich — as soon as possible. Chances are that we won't see it happen until sometime early next year, but we understand very well how nerve-wracking it can be to purchase a phone with an uncertain future, not knowing if or when the latest and greatest firmware updates will roll out.

### Performance and battery life

The Rezound has a beast rumbling inside it — namely, a 1.5GHz dual-core Qualcomm MSM8660 (Snapdragon S3) CPU with an accompanying Adreno 220 GPU. This is a splendorous slab of silicon hiding somewhere within that 14mm of thickness, and it shows in the phone's performance. We found the high-end processor to be more than capable of handling our multitude of various simultaneous tasks, and made Sense rather smooth. We never experienced any lags or crashes due to the

phone not being able to handle our usual smattering of multitask demands.

In our benchmark comparison the Rezound didn't fare so well against the Droid RAZR, but it soundly defeated the HTC Vivid, its AT&T rival. That said, it's difficult to get an accurate comparison in these benchmarks due to its HD display — and phones that run the heavy Sense skin certainly don't bode well when going to battle with TouchWiz and Moto's not-Blur interface. Regardless, it still managed to pull down respectable scores in virtually every benchmark.

A variety of factors like LTE, HD display, Sense UI and a smaller 1,620mAh powerpack all contributed to the phone's subpar battery life. When performing our standard video rundown test, the Rezound ran through looped movies for around four hours and fifteen minutes before shutting off completely, and that was while 4G, WiFi or GPS was turned off. We managed to eke out twelve hours of life when using the device at a mod-

BENCHMARK	REZOUND	VIVID	DROID RAZR	SKYROCKET
Quadrant	2,347	2,129	2,798	3,334
Linpack Single (MFLOPS)	52.0	44.5	50.0	50.6
Linpack Multi (MFLOPS)	60.3	50.9	95.6	77.4
Nenamark 1 (fps)	53.5	47.3	50.3	59.8
Nenamark 2 (fps)	35.8	26.6	27.5	54.1
Neocore (fps)	59.8	58.0	59.9	57.7
Sunspider (ms)	2,961	4,095	2,140	3,115



erate pace—in other words, our usual litany of push email, social networking, taking photos and videos, and other smallish tasks—it gave us a battery performance worse than the Droid RAZR, which means you’ll definitely need to charge it each night before going to bed. We didn’t experience any concerns with call or audio quality, thanks to a strong Verizon network in our local area and the secondary noise-cancelling mic to help filter out unwanted background sounds. We were also able to lock down a solid GPS location in less than five seconds.

## Beats

We mentioned earlier that the Rezound’s the first HTC device in the US to offer

integration with Beats Audio. This fusion is two-fold: first, the music player itself is Beats-enabled, taking advantage of a special sound profile (EQ setting). Second, the Rezound comes included with a set of iBeats in-ear headphones (a \$100 value). We’ve already covered the Beats Audio integration in exhausting and incredibly scientific detail as part of our review of the HTC Sensation XE; since the setup on both sides of the pond is the same, our scientifically justified opinion of the Beats Audio integration hasn’t changed.

The tailor-made iBeats headphones that come in the box are, hands-down, the fanciest set we’ve ever seen included with a US handset. Heck, there are plenty of times that carriers won’t even throw in a complimentary pair at all. If you’re not a gung-ho music enthusiast and just want a good quality pair of earphones to go with your new LTE treasure, this will be more than you ever bargained for. And quite frankly, they end up offering a good overall listening experience — as long as you’re listening to tracks that are thick on the bass and the Beats Audio is enabled, that is. Even then, it’s not that much better than our enjoyment of the HTC Vivid music player using a \$100 pair of earphones from a competitor. Also, disable the Beats Audio enhancement and listen as your music dramatically becomes much more quiet, the EQ flattening in traumatic fashion. And there’s no way to customize the sound profile to fit your own wishes, regard-


less of whether Beats is enabled or not.

Sure, it's great to see a phone come with a pair of headphones that doesn't look like it was picked up in a bargain bin, but what's the additional cost to the handset here? While the hardware certainly adds value to the overall phone, the software itself isn't expansive enough for our tastes and we want to be able to customize our tunes to fit our own personal preferences rather than be forced to listen to music the way Dr. Dre intended it to be heard.

### Wrap-up

The Rezound is one of the most well-stocked phones we've ever seen. It's certainly got swagger, since it tops the spec comparison charts in nearly every category and even beats out the iPhone's Retina Display. Speaking of Beats, it has those too — though hardcore music enthusiasts will likely be disgusted by the lack of customizable options. We

enjoyed the Rezound because of the display and the phone's overall performance, but you have to be a fan of Sense—and tolerate the lackluster battery—in order to place it above the Galaxy Nexus on the wish list.

There's also one other factor at play. Verizon's debuting its newest LTE phone at a premium cost: \$300. Until AT&T started releasing reasonably priced LTE handsets like the Vivid (\$200) and the Skyrocket (\$250 in stores; \$150 online), Big Red did a terrific job at making its high prices sound like the norm. We have to admit—while the Rezound is packed with all of the specs we could want, three Benjamins is still a tough pill to swallow, no matter how wonderful the device is. 

---

*Brad is a mobile editor at Engadget, an outdoorsy guy, and a lover of eccentric New Wave and electro. Singer and beatboxer.*

## BOTTOMLINE

### HTC REZOUND

**\$300**

#### PROS

- Top-notch 720p HD display
- Wonderful processing power
- Best headphones we've seen included in-box

#### CONS

- One of the thickest LTE phones to date
- Battery life is well below average
- Too expensive, regardless of its specs

The Rezound is packed with some of the best specs you can find on the market today, and may give the Galaxy Nexus a run for its money.



# Verizon SCH-LC11 LTE hotspot, Sennheiser CXC 700 headphones and the Xperia Arc

BY ENGADGET STAFF

*Welcome to IRL, an ongoing feature where we talk about the gadgets, apps and toys we're using in real life and take a second look at products that already got the formal review treatment.*

**It's that time** of the week, where we take a pause from the blitzkrieg of hands-on opportunities and pick apart the gadgets we've been using long-term. This time around, Joe tries Sennheiser's CXC 700 headphones, Mat defends the original Xperia Arc and Darren breaks down the pitfalls of trying to get work done with a temperamental Verizon Wireless hotspot. Because when it comes to getting a consistent LTE signal across the US, what could possibly go wrong?

## **Nice speed, if you can get it**

On good days, I heart my SCH-LC11 beyond belief. It's remarkable. Amazing. Beautiful. Invaluable. Other days, I ponder just how far I could throw it while still being close enough to relish in the explosion that'll come after it hits an undetermined brick wall. As one of Verizon Wireless' first CDMA / LTE multi-mode hotspots, I knew this thing was bound to have bugs, but it does something that almost no other mobile hotspot does: charges over USB,





while still being active. Inexplicably, the Novatel MiFi units that I have used will not actually charge *and* transmit data if plugged into a computer's USB port — which makes precisely no sense, given that said scenario is the best one for keeping a) a computer online and b) the MiFi charged. (I personally use a power-only USB cable that I scraped up on the streets of Hong Kong to solve that problem, but I digress.)

The SCH-LC11 doesn't have that problem, and in turn, it gets major props. But what it lacks is reliability. Forums are overrun with complaints of this thing turning itself off after five to ten minutes of use, and while I've survived days upon days in LTE land with no issue, I'll have weeks where this happens constantly. It's completely random, so far as I can tell, and the time it takes to power cycle and turn back on is

exceptionally annoying. If you can test these out until you find one that doesn't have this issue, it's a beautiful product. The LTE performance is shocking, and the ability to charge it wherever, whenever is a huge asset. But if everything else in the world shut off after five...

— *Darren Murph*

### **There's something about the Arc**

Arguably Sony Ericsson's flagship handset, the skinny Arc follows me everywhere. This one's now approaching the six-month mark, always accompanying me alongside my wallet and whatever new phone I'm getting to grips with (fortunately, I haven't taken to the Engadget trend of rocking five phones on four operating systems just yet). This is the one I keep coming back to when all those review handsets have flown the nest back to their respective manufacturers. Fundamentally, it's a single-core Android phone, running Gingerbread. It's got a 4.2-inch LCD display and an eight megapixel camera that can record 720p HD video. But casting the middleweight specifications aside, when I'm away from my desk and using the phone, there's so much to love. The curved frame that slips into my pocket, the tactile buttons and the camera, which is superb.

Several times, I've had to use it in a pinch to capture shots of never-before seen phones and tablets, and though they may not pass muster when compared to a dedicated camera's output, they appeared more than respectable



when dressed down for the web. The screen pushes the envelop of what I expected from non-AMOLED tech — it's sharp and the colors are rich. However, if I look to the phone from the side or try to show photos and video to friends, viewing angles are poor in comparison to other 4.2-inch options. The screen on my phone has also suffered a hefty chip, now knocking points off the screen's wow factor, and something that you'd have to try pretty hard to do on Gorilla Glass. Yes, the Arc's far from perfect.

The creaky piece of plastic enveloping the phone is suspect, and Android purists in particular will dislike Sony Ericsson's processor-taxing bloatware. Those physical buttons below the screen, though welcome, could have done with some light-up signifiers. And at its current pricing, there's not much of an excuse not to spend an extra fifty quid on a technically superior phone. But, like Nokia's N9 or Lumia 800, the

phone exudes charm: that oddly convex shape, the surprisingly impressive level of detail on photos and the admirable screen performance. Sony Ericsson's Arc refresh gives the series a minor performance boost and a lick of white paint, but intrinsically they're the same device. So for now, between the more powerful, bigger-screened competitors that pass my desk, you'll find my main SIM living in the Xperia Arc.

— *Mat Smith*

### **Can't cancel out that cable noise**

Living near New York City, I'm accustomed to the ambient noise of the day-to-day hustle. It doesn't bother me, since as a kid I was never one to focus without the TV or radio blaring in the background. Plus, having recently developed tinnitus, extra noise helps to keep my mind off the constant ringing. Still though, there's one time when this noise and I are bitter enemies, and that's when I'm trying to listen to my music while traveling. Cue Sennheiser's CXC 700 noise-cancelling earphones, which the company loaned us to test.

You'll find these selling for around \$200, so as you might imagine this is intended to be some serious kit. Opening the box, I was greeted by a nice batch of other goodies not limited to a semi-hardshell case, a cleaning tool and nicely enough, an off-brand AAA-battery. I was, however, surprised at how plasticky the earphones felt, worsened by slabs of fake chrome on its buds and unpleasantly heavy inline





controller (the weight comes from the battery, which needs to be clipped to a belt-loop.) That said, the cabling handles tugs without breaking, while its right-angle jack ensures the same on my PMP's end. Better yet, the CXCs are some of the most comfortable earphones I've used, with a lightweight fit that maintained an admirable seal. I have little complaint about the full-bodied (if slightly bright) sound quality and appreciate that the 'phones could operate passively (sans noise-cancellation) if the battery died.

Keeping noise out, though, was an interesting matter. In use, the headphones were generally pleasing, offer-

ing three customizable settings, and even a TalkThrough mode to spy on the person a few seats over. It's a shame that cable noise was at an all-time high, though, consistently dragging any rubs against clothing right into the earbuds — tainting its noise-cancelling benefits. Worse still, the initial unit I tried out had a tendency to amplify certain high frequencies of buses and subway cars into a brief squeal. The CXC 700s are a likeable set of 'buds which worked very well in many ways, but after using two pairs I can't fathom paying the asking price for a pair of headphones with these issues in tow. — *Joe Pollicino*





*review*

# Barnes & Noble Nook Tablet

BY BRIAN HEATER

**Back in April**, the Nook Color underwent a magical change of sorts: a software update that transformed the device from a color screen e-reader into an honest to goodness Android tablet. It was the company's first swipe at the space — a backdoor approach that beat out fellow e-reader manufacturers like Amazon and Kobo. Its follow-up, the Nook Tablet, marks the company's first out-of-the-box shot at the consumer tablet market. Not to mention, it also goes head to head with the Kindle Fire,

a device that's sure to be one of the best-selling gadgets of the holiday season, thanks to its price and wide content selection.

Does the Nook Tablet have what it takes to topple the Kindle Fire? Do the product's benefits justify its \$50 premium over Amazon's foray into the tablet market — or the recently discounted and soon to be upgraded Nook Color for that matter? Read on to find out the answers to these questions and so, so many more.



## Hardware

Need a fun way to pass the time this weekend? Why not roll down to your local Barnes & Noble for a round of “Nook Tablet or Nook Color?” It’s the gadgety game that’s sweeping the nation. Yes, it’s been said before, but it bears repeating: the Tablet is nearly identical to its predecessor. When we asked Barnes & Noble why it opted to go with the same form factor, a company rep told us it was because the Nook Color was such a successful device with an immediately recognizable design. In other words, the Nook Color wasn’t broken, so Barnes & Noble didn’t fix it — besides, the company surely wanted to make the most of its Yves Behar investment.

The only major changes to the body are a lighter color (a metallic silver to the Color’s dark gray), and a slightly more textured back, which should help when it comes to keeping the thing from slipping to the floor during a particularly saucy D.H. Lawrence passage. Also, in spite of some revamped innards, the company managed to shed a little more than an ounce on the reader, knocking it down to 14.1 ounces (400 grams) — half an ounce less than the Fire.

However familiar it is, the Nook Tablet has a distinctive design in a market filled with iPad lookalikes. And yes, its chief competition, the Kindle Fire, looks an awful lot like the BlackBerry PlayBook, as we’ve mentioned many times before. The most distinctive feature, hands-down is the little carabiner loop that juts out from the bottom-left corner of the reader, a design decision

made largely to set the device apart from other tablets according to B&N — and to offer some protection for the slot that lies on the other side.

The Nook tablet measures 8.1 x 5.0 x 0.48 inches, making it slightly larger than the Fire in every respect, particularly height. The Nook is tall for a seven-inch tablet. This is thanks, in part, to its sizable plastic outer bezel, as well as a bar below the screen that houses the home button, which is better defined here than on the Color. The black bar is flush with the display this time out and at first glance appears larger than the one on the Color. Still, once you turn on the Color, you’ll notice a black bar lining the bottom of the screen, which effectively cancels out the benefit of having a narrower bezel.



Two large volume buttons are located on the top of the Tablet’s left side, with the power button on the right side. The Nook has four physical buttons in all — three more than the Fire’s solitary power button, a plus for easy access and those moments when the touchscreen

acts up, which has certainly been known to happen on these budget tablets. Oh, and unlike the Fire, you can actually adjust the volume without diving into the settings. Point Barnes & Noble. A headphone jack is located along the top of the slate, with a micro-USB port positioned at the center of the bottom. Flip the device over, and you'll see a small speaker grill. The speaker has been bumped up a bit this time out. It can achieve an audible volume, but like the Kindle Fire, the quality is abysmal. You'll most likely find yourself reaching for the headphones (not included).

The back of the Tablet is convex (which is why it comes in a tiny bit thicker than the Fire), so it conforms to the hand a bit better than the perfectly flat Kindle Fire. A big, indented lowercase "n" sits in the middle of the non-removable back. On the bottom, next to the carabiner is a silver strip reading "nook." Pry it open with a fingernail and you'll find the microSD slot.

The Nook has a nice size and shape that come in handy during long reading sessions — something B&N clearly took into account when building it. Your thumb grips comfortably around the plastic bezel, with your fingers on the upside down horseshoe on the rear, which brings to mind the Nook Simple Touch's concave backing. This might have served as another avenue for aesthetic distinction here, though no doubt would have ultimately served to add more girth to what is already a largish footprint for a seven-inch tablet.

The Nook ships with a micro-USB

cable and AC adapter, which you'll need to charge it up — no PC charging for this guy. The former has the device's "n" logo on one end, changing color with battery status: yellow for charging and green for full. Sure, you can simply unlock the device to find out, but it's a nice little extra touch.


## Internals

Here's where the Tablet shines, compared to its older brother. Here, B&N has given us a 1GHz dual-core processor and 1GB of RAM, both upgrades from the Color's 800MHz single-core CPU and 512MB of RAM. The RAM is also double that of the Fire, though the processor clocks in at the same speed.



As with the Fire, the Nook Tablet only comes in one flavor, spec-wise — B&N likely didn't think it would be able to get away with offering another level for \$50 more. After all, it already chose to keep the Nook Color around for \$199.


The Nook Tablet steps things up on the storage front, too, with 16GB — double that of the Kindle Fire. Things get a little



tricky here, however. As with the Fire, around 2 to 3GB are monopolized by OS-related content. A full 12GB of the Nook's storage, meanwhile, are devoted to content downloaded from B&N, like books and magazines. That leaves a paltry 1GB of storage for non-B&N content — i.e. all of the stuff you're side-loading onto the device. That may not sound like a crazy proposition if you're only planning to store some documents on the thing, but if you were planning on storing a bunch of music and movies from your own collection, you're kind of out of luck. And, indeed, the ability to simply drag and drop content from a PC and have it show on the device is certainly a selling point for the Nook Tablet.

Barnes & Noble assures us that, as the company moves forward with multimedia deals in the year ahead, more third-party content will be storable in that 12GB section. There are a few things to note here on top of that promise. First, like Amazon, B&N is really focused on streaming multimedia content here through apps like Netflix, Hulu Plus and Pandora, all of which come pre-loaded on the Tablet. Also, there's the aforementioned expandable memory, a feature that Amazon has roundly eschewed in its Kindle line. Pick up a microSD card, and you can rock up to an additional 32GB of storage.

Connectivity-wise, we're talking WiFi. As with the Fire, there's no 3G option here, and if the Color is any indication, don't expect to see one any time soon.




## Pick up an SD card, and you can rock up to an additional 32GB of storage.

The Nook maintained a WiFi connection fairly well, even managing in some places where the Fire failed. The company is also taking advantage of its brick and mortar presence to offer up free in-store WiFi on the Tablet, as with its other Nook brethren. As far as Bluetooth goes, however, you're gonna have to look elsewhere.

### Display

As with the rest of the outside of the Tablet, Barnes & Noble left the Nook Color's screen intact. Like the Fire, we've got a 1024 x 600 seven-inch IPS LCD. Placed against Amazon's device, the Nook Tablet seems a touch brighter. B&N is talking up the display's lamination, which helps reduce glare, helping improve the Tablet's viewing angles. The glare does appear to have been reduced just a bit, but again, we were hard pressed to detect any major differences between the Nook and the Kindle in that department.

Again, the perpetual e-reader vs. tablet disclaimer is in place here: if you're just in the market for a device to read long chunks of prose on, invest in a Nook





Simple Touch or Kindle Touch. E-ink is easier on the eyes than backlighting for long stretches and is much more easily read in sunlight. That said, you can read the Nook Tablet in a dark room, without the aid of a booklight, and there's surely something to be said for that, right?

### Battery

As with the Fire, the Nook Tablet's battery pales in comparison to its E-Ink brethren, but as far as 7-inch color tablets go, the device didn't do all that shabby in our standard battery run-down test, managing eight hours and twenty minutes on a charge. It's not quite the "up to nine hours" promised by the company, but it still handily beat the Kindle Fire's seven hours and 42 minutes. That'll get you through a lot of *Archer* episodes on Netflix.

### Performance

As mentioned earlier, the internals are the key distinction between the Nook Tablet and its still very much alive predecessor. This time out, the Nook is rocking a 1GHz dual-core processor and 1GB of RAM, and yes, there's a noticeable difference in speed, even with something as simple as loading an app like *Angry Birds*. The distinction is a bit less pronounced between the Kindle Fire and the Nook, though it is there, with the Nook just beating the Fire when loading apps. The Tablet was able to take just about everything we threw at it with minimal hiccups.

There isn't a ton of distinction between

TABLET	BATTERY LIFE
Barnes & Noble Nook Tablet	8:20
Amazon Kindle Fire	7:42
Apple iPad 2	10:26
Samsung Galaxy Tab 10.1	9:55
Apple iPad	9:33
Samsung Galaxy Tab 8.9	9:21
HP TouchPad	8:33
Lenovo IdeaPad K1	8:20
Motorola Xoom	8:20
T-Mobile G-Slate	8:18
Galaxy Tab 7.0 Plus	8:09
Lenovo ThinkPad Tablet	8:00
Archos 101	7:20
Archos 80 G9	7:06
RIM BlackBerry PlayBook	7:01
Acer Iconia Tab A500	6:55
Toshiba Thrive	6:25
Samsung Galaxy Tab	6:09

the Nook and the Fire, when it comes to browsing. The Kindle seems a bit more equipped to handle text and the Nook does a better job with images when loading pages. Both devices do pinch-to-zoom, scrolling and the like capably. SunSpider 9.1 told a bit of a different story, with the Nook racking up a 4,135 — that's low, especially compared to the Fire's score of 2,440. The difference in results may have something to do with the Kindle's Silk Browser, which utilizes Kindle's massive server resources, to do the heavy lifting for page rendering —

# The most clear performance distinction between the Fire and the Tablet can be seen when playing video.

a tool that the company promises will continue to improve over time.

The most clear performance distinction between the Fire and the Tablet can be seen when playing video. We streamed *Shutter Island* on Netflix and were blown away by the difference. The Nook's video playback handles motion far more gracefully than the choppy Fire. And it picks up on subtle details that bleed and blur when played back on the Kindle. The Nook Tablet definitely wins that round.

## Interface

Amazon seemingly went out of its way to mask all traces of the Android interface it was running on top of. Barnes & Noble made some big adjustments to the operating system as well, but anyone who's used Android for any length of time will likely recognize the operating system. Where the Fire is locked into a bookshelf-like UI, the Nook offers up a pretty standard mobile desktop — one with a default wallpaper that is thankfully less busy than the one offered up on the Color.

The Color's top bar is largely intact here, however, deferring to the Tablet's

reader roots by offering up the name of the book you've been reading. Barnes & Noble is having it both ways, however, pushing the device's multimedia functionality at the same time. Click "More," and you get a list of your books, periodicals and Netflix picks, if you're online and logged into the service. A row of icons offers up apps you've used and books you've recently read — these can be dragged and dropped onto the desktop, if you're so inclined. Below that row are icons for including movies (via Netflix and Hulu Plus), music (via the built-in music player and Pandora), and a list of apps. Barnes & Noble is really driving home the fact that it's got a true multimedia device, this time around.

Still below that row is a battery-level indicator, the time, and an open-book icon, which is visible across many of the Tablet's features, a gentle reminder that, even in the face of streaming movies and music, this device is a reader at heart. Clicking the "n" button brings up yet another menu, offering up ways of accessing home, library, the shop, search, apps, the web, and settings. Clicking the library icon will bring up an interface more like the Fire's

default screen, complete with shelves. It doesn't look as good as the Kindle's classy wood design, but does the trick. There are shelves for apps, books, magazines, newspapers, kids books and further customizable options.

As with the Fire, the app selection is limited to those Barnes & Noble wants on the device. Of course, there are workarounds — lots of them, in fact. We were feeling a bit saucy and managed to load the Amazon Appstore on the slate (here's where that microSD card comes in handy) with little effort. Or, you can always just root the Tablet. Barnes & Noble would prefer you score your content through officially sanctioned channels, of course, but the company hasn't exactly made it difficult to find other avenues.

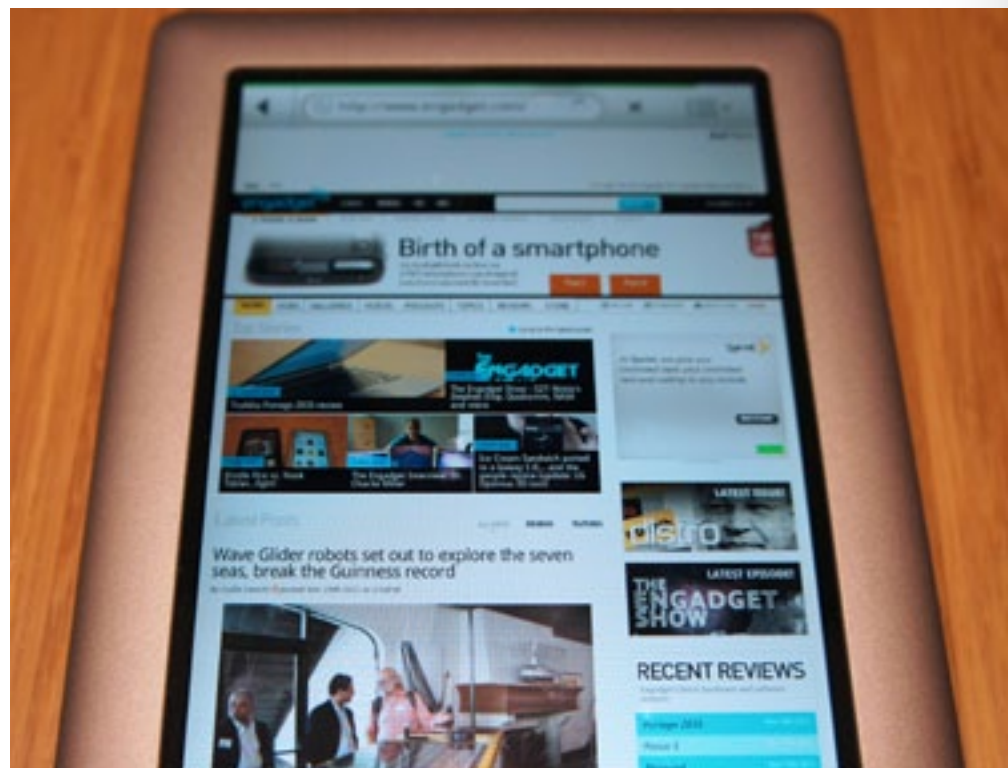
## Browser

Where the Silk browser was one of Amazon's major selling points for the Fire, browsing speeds are less of a focus on the Nook Tablet. After all, Barnes & Noble doesn't have its servers doing all of the work for the device. The Nook browser doesn't offer a lot of bells and whistles, though unlike some 7-inch Gingerbread tablets like the Kobo Vox, the thing actually renders pages in their desktop form, rather than as mobile sites.

Layout-wise there's not a whole heck of a lot of differences between the browsers on the Nook Tablet and Color. At top is an address bar, a back button, a star icon for bookmarks and an icon for

additional options like opening up new windows, viewing bookmarks, refreshing, and paging forward. Hold down on a page, and you'll get options for searching on it, getting page info, adjusting settings, viewing your downloads and bookmarking.

Zooming and scrolling are zippy on the reader. You accomplish the former by either pinching, double-tapping or clicking plus and minus buttons that pop up as you scroll. And, yes, unlike some other tablets, this one is fully capable of playing Flash video, and it does so quite smoothly.



## Magazines

The thought of reading an image-heavy magazine on, say, the Nook Simple Touch, seems like a downright nightmare — the grayscale images, the clunky zooming, the endless scrolling. Compared to its e-reader predecessors, the Nook Tablet's full-color multitouch screen is a delight. Given the real estate





limitations of the 7-inch screen, however, there's a still good deal of pinching to zooming and scrolling happening here to properly take in all of the text and images.

As we suggested in the Fire review, a 10-inch display is a far more ideal size for reading standard format magazines. Many magazines not formatted specifically for the device will show a black bar on the bottom to format them to the page — of course, this will go away as you zoom in.

As with other texts, the Nook Tablet will offer you the option of picking up where you've left off, if you've been reading a copy of a given magazine on

another device. The pages have animation similar to that on the iPad, simulating the experience of flipping through a physical magazine. Tapping a page in the center will bring up buttons for the table of contents, brightness adjustment and a handy gallery of thumbnail pages that you can quickly swipe through to find a spot in the periodical that you'd like to check out. Along the top of the page is a black bar offering up the magazine's name in one corner and a plus in the other that you can tap to bookmark a page, dog ear-style.

## Comics

Comixology on the iPad is still the gold





standard for digital comics reading. That said, the Nook Tablet's built-in comics reader certainly does an admirable job recreating the experience. The screen offers up vibrant screens for brightly colored books. The blues and reds of Spider-man's costume really pop on the seven-inch screen.

Unlike the Fire, the Nook Tablet can pinch to zoom in those spots of artwork that require closer inspection or pieces of text that are just too small to read with the page at full-size. However, the Fire's panel-by-panel reading method is really the ideal way to experience a comic on a screen with limited screen space. With the Nook, you regularly find yourself pinching to get a closer look and scrolling around like mad to make it around

the page. Once you flip the page, the whole thing pops back into place.

If you're reading a book with two-page splashes, you can shift the device to landscape mode, to look at two at once. Of course, given the size constraints, the text becomes much harder to read. The preview gallery found in magazine mode is also present here, and it looks really great flipping through brightly-colored action pages.

### Children's books

The full-color screen is also great for kids books, and thanks to their relatively limited text, they generally scale better than magazines or comics. Given the Nook Tablet's smaller size and cheaper price point, it actually may be a better option

for young readers. When you click open a compatible title, you're greeted with three options. Read By Myself gives you the standard reading experience, Read and Play offers narration that reads for you as you flip through, and thanks to a built-in mic, Read and Record lets parents record narration on a selection of kids titles, so children have someone to read to them when they're not around.

A little arrow icon on the bottom of a page offers up a similar thumbnail gallery with large images of the book's pages. Some of the titles, like the Michael Chabon-penned *The Astonishing Secret of Awesome Man* offer up activities on each page. Clicking the star icon on the top lets kids know how they interact with the book, such as touching characters to see animations.

## Books

This wouldn't be a Nook without the reading, right? In spite of all of its flashy multimedia capabilities, Barnes & Noble clearly considers the Nook Tablet a reading device at heart. The reading experience doesn't stray too far from the one offered up by the Nook Color. The pages are monopolized almost entirely by text, save for the ubiquitous bar at the bottom offering up WiFi strength, battery level and page numbers, with both your present page and the total number in the book, a feature curiously absent from the Kindle's default layout. Clicking on the numbers brings up a slider for adjusting your place in the book. You can also just enter a number

**In spite of all of its flashy multimedia capabilities, Barnes & Noble clearly considers the Nook Tablet a reading device at heart.**

manually by clicking Go to Page.

As with the Fire, you can navigate through the text by swiping forward or back or tapping a margin. Tapping on the center, meanwhile, brings up a menu offering up the table of contents, a search function, sharing, text, brightness adjustments and a "Discover" feature, which offers up texts similar to the one you're reading. Interestingly, both Barnes & Noble and Amazon opted not to feature a pinch-to-zoom option in the standard reading interface, choosing to use a simple method for adjusting text size instead.

In the menu, you've got a healthy number of options for looking at the page, however, including eight text sizes, six fonts, six color themes from black on yellow to white on brown (for when the white LCD gets to be too much), three margins and three line spacing layouts. Barnes & Noble does a solid job leveraging the color screen here by giving you a ton of viewing options for the reasonably simple task of looking at plain




text on a page.

## Wrap-up

The market was already crowded well before Barnes & Noble announced the Nook Tablet, a situation that certainly didn't improve for the company with the announcement of the Kindle Fire. Anyone eyeing the Nook Tablet either as a gift or for themselves will almost certainly be cross checking it with Amazon's new much-discussed slate. And then there's the fact that the Nook's predecessor, the Color, didn't actually go away with the announcement of the new device — rather, it got cheaper and better.

At \$249, the Nook Tablet also costs a full \$50 more than those products, a difference that's not negligible when we're talking about budget devices. The words "under \$200" mean a lot

to shoppers. Of course, you get some decided advantages along with that premium, including more RAM, great video, a microSD slot and attention paid to smaller things, like the built-in mic, which lets users do things like recording narration for kids books.

Amazon, on the other hand, offers up a smaller form factor, price and better proprietary media options. There's really no clear winner here, but with the addition of two now-qsolid products to the ever-expanding world of tablets, there's an even greater chance that the consumer will get precisely what they're looking for. 

---

*Brian's work has appeared in Spin, The Onion, Entertainment Weekly, The New York Press, PCMag, Laptop, and various other publications.*

## BOTTOMLINE

### Barnes & Noble Nook Tablet

**\$249**

#### PROS

- Excellent video quality
- Expandable memory
- Fast performance for a budget tablet

#### CONS

- Upgrades from the Color are relatively minor
- Limited built-in storage for side-loaded content
- 7-inch screen is a bit small for magazines and comics

Barnes & Noble's budget tablet manages to give the Kindle Fire a run for its money, even though it costs \$50 more.



*review*

# Toshiba Portege Z835

**Lightest. Least expensive. Best selection of ports.** There are tons of reasons to love this aggressively priced Ultrabook, though its dated design and so-so performance will turn off some shoppers.

BY DANA WOLLMAN

**Toshiba should know** a thing or two about skinny, featherweight laptops. Back in 2007, the company unveiled the Portege R500, a 2.4-pound laptop measuring what was then an anorexic 0.77 inches (19.6mm) thick. Much to everyone's disbelief, it managed to squeeze in an optical drive. Fast forward four years and it's entering the Ultrabook market with the Portege Z830 (that's

the Z835 if you get it at Best Buy). And here comes the déjà vu: it's even lighter than the competition, at 2.47 pounds, but still houses a full suite of ports, including USB 3.0 and 2.0, HDMI and Gigabit Ethernet. It also promises more than eight hours of battery life, besting claims made by the likes of Apple, Acer and ASUS. Not to mention, with a price of \$800 (Best Buy only), it under-





cuts competing models — and at a time when every other Ultrabook seems to have some fatal flaw, whether it be a flaky touchpad or skimpy battery life. Clearly, there's lots of room here for something more carefully thought-out. So is Toshiba's Portege know-how just what the market needs? Let's see.

### Look and feel

For a machine that's going to sit on the shelf at Best Buy, the Z835 looks like it would be more at home under the arm of some suited, late '80s businessman. We're not sure if it's the drab black-on-

gray color scheme, the chintzy chrome accents or some combination thereof, but put together they make for a design that's at once dated and stuffy.

It doesn't help that there's a lot going on here: in addition to the power button, the area above the keyboard is home to two launch keys, including ones for Intel Wireless Display and Toshiba's eco utility (more on that later). There's also a thin strip below the touch buttons that houses six LED lights that glow green and orange. Wedged in between the space bar and the touchpad is a button for turning off the trackpad. In a



quirky touch, the fan sits on the bottom side, protruding ever-so slightly. The hinge, meanwhile, has a metal shoulder on each end that matches the reflective material used in the touch buttons. That wouldn't be so noticeable if it weren't for the fact that there's a thin cutout above the hinge in both those spots, putting about an eighth of an inch of blank space between the hinge and the corners of the display — an optical illusion that fools you into thinking the screen is sitting higher than it is. As a finishing touch, the palm rest comes plastered with four stickers. You can remove these, of course, though we wish more OEMs would paint them on the bottom, as Lenovo did with the IdeaPad U300s.

It's a shame because in a blind hands-on, the Z835 feels exactly like we'd always hoped Ultrabooks would feel. At 2.47 pounds, it's almost half a pound lighter than the Air, and believe us when we say you can feel the difference. What's incredible, too, is that despite being so featherweight the Z835 still crams in more ports than anything else we've seen. These include a USB 3.0 socket and Kensington lock slot on the right; an SD reader, headphone and mic ports on the left; and a buffet of openings 'round back that includes twin USB 2.0 ports, Ethernet, HDMI, VGA and the power port. Of those USB 2.0 sockets, one of them uses Toshiba's Sleep and Charge technology to charge gadgets while the laptop's dozing fitfully.

The only Ultrabook that come close to this kind of spread is the new HP Folio 13 and, as it happens, it's also the heavi-

est of the bunch, at 3.3 pounds. Otherwise, almost every Ultrabook is missing something. The 13-inch MacBook Air has two USB 2.0 ports, an SD slot and a Thunderbolt port, for which there aren't yet many compatible peripherals. The ASUS Zenbook UX31 has USB 3.0 and 2.0, mini-HDMI and mini-VGA, and comes with Ethernet and VGA adapters. The U300s, meanwhile, has HDMI, USB 3.0 and 2.0, but no SD slot or Ethernet jack. Finally, the Acer Aspire S3 — one of Toshiba's main competitors at this price point — houses two USB 2.0 ports, as well as HDMI-out.

With lightness, though, comes mixed build quality. Although the Z835 is made of magnesium alloy and has the same honeycomb caging you'll find inside other Porteges, it feels less solid than either the Air or UX31. When you grip it in one hand, the whole thing feels sort of hollow, especially as you press your fingers into the bottom side. We also noticed the lid wobbles, especially after you set the laptop down. Then again, that brushed metal casing proved immune to both scratches and fingerprints, so however flimsy it felt, we never felt compelled to handle it with kid gloves.

### Keyboard and trackpad

The Z835's keyboard is on par with those belonging to some of the other Ultrabooks we've tested, but that isn't exactly saying much. As with so many other chiclet arrangements, the keys here don't offer much travel. Worse, still, each individual key has a squat shape,



leaving barely enough vertical space for even small fingertips. Suffice to say, that didn't stop us from typing portions of this review (and with few spelling errors, at that). We suspect you'll adapt, as people often do to imperfect keyboards, though we'd be remiss if we didn't warn you that there's a learning curve.

Still, Toshiba wisely extended the keyboard from one end of the deck to the other, wasting very little space on the sides. As a result, most of the major keys — Enter, left and right Shift and Caps Lock — are amply sized and easy to hit if you're touch typing. (Others, such as the Fn and right Ctrl buttons, have been reduced to the size of a fingernail, and are no larger than any of the lettered keys.) The typing here is also pretty quiet, with the keys making a comforting, low-pitched sound. Another bonus:

it's spill-resistant, showing Toshiba is indeed putting its business-centric Portege expertise to good use here.

The Z835's keyboard is also backlit — not too shabby, considering the \$900 Acer Aspire S3 doesn't have this feature (the \$900 HP Folio does, however). Not to look a gift horse in the mouth, but we noticed it isn't particularly bright. If you sit on the side of the laptop (you know, away from the keys), you'll see white lights glowing beneath the buttons. To Toshiba's credit, the backlighting does become more obvious as your surroundings get dimmer, which means it'll come in handy the next time you attempt to work through an overnight flight. But even then, the lighting feels more subtle than what you'll see on the Folio or Air: you're not going to see white light pooling beneath the keys,





just a faint glow from the keycaps, leaving you with barely enough of a glow to type in the dark.

The 1.75 x 3.3-inch touchpad, though short, offers a smooth, low-friction surface that makes it easy to drag the cursor across the screen — nope, no lag or jumpiness for once. It even pulls off pinch to zoom reasonably well. The problem is that the pad is small enough that you'll have to angle your hand just so in order to have enough room to stretch those fingers out. Even then, you'll likely feel your fingertips bump against the edges of the trackpad. It also supports one- and two-fingered scrolling, but for whatever reason, neither gesture is enabled out of the box; you'll

have to go into Synaptics' device settings and select these options yourself.

The two touch buttons should serve as evidence that sometimes, a staid design can have its advantages. Yes, those buttons are made of a tacky reflective metal that collects your oily fingerprints. But there's something to be said for not having to put up with a touchpad with built-in buttons — you know, the kind we often rail on for being too flaky. Here, the buttons are reliable, easy to press and fairly quiet.

### **Display and sound**

Like every other Ultrabook offered at this price, the Z835 has a 1366 x 768 display. We figure, if more pixels are a necessity,



you shouldn't have any qualms about spending an extra three hundred bucks on the UX31, which comes standard with a 1600 x 900 panel. As for everyone else, that 1366 x 768 pixel count should be enough for checking email and scrolling through webpages. So our real gripe about the screen actually has very little to do with specs, but, rather, the quality. Granted, TN displays in general don't offer great viewing angles, but they seem particularly narrow here. If you look at the display head-on with the brightness cranked up, you'll enjoy pleasant colors and crisp-enough detail. Dip the lid forward, though, or watch from the sides and you'll see the picture become washed out with more severe contrast. As with so many other displays we've tested, it's adequate, but you will have to remember to adjust the screen carefully before settling in for your next *True Blood* marathon.

Toshiba also threw in its Resolution+ technology, which promises to upscale video to as high as 720p. While it doesn't hurt to have this feature, it's more of a marketer's bullet point than anything else. For one, you can only use it in Windows Media Player 12, which means this won't compensate for the amateur quality of home videos on YouTube and Vimeo. Even when we used it in Windows Media Player, though, we didn't notice much of a difference. Grainy videos looked as pixelated as ever.

Here's your first clue that audio quality wasn't a top priority for Toshiba: the volume controls are built into the "3" and "4" buttons, while the main row of

function keys is given over to things like locking the computer, going into hibernation, adjusting the brightness and disabling the touchpad (an odd thing when there's also a discrete button for that). Oddly, too, there's no onscreen indicator showing the volume level as you adjust it.

As it turns out, the sound quality is fairly ho-hum, though volume is the least of its failings. It's not as loud as, say, the Bang & Olufsen-equipped UX31, though it's on par with other Ultrabooks, such as the U300s. No, the real weakness is the way tracks sound — and that's despite MaxxAudio software on board to help enhance the quality. Pop songs by the likes of Lady Gaga sound alright at median volume settings, but they take on a distant, metallic quality as you pump the volume. Rap tracks and more bass-heavy numbers are predictably thin as well.

## Performance

The \$800 configuration we tested sports a 1.4GHz Core i3-2367M processor, 4GB of RAM, a 128GB SSD and an eight-cell battery rated for 8.28 hours of runtime. Given its price, it performs well. Thanks in part to its Hi-Speed Start technology, it boots in 23 seconds — almost half the 45-second startup time we observed with the similarly priced Aspire S3. Its benchmark scores are higher across the board, too: it notched a 500-point lead in PCMark Vantage and a nearly 400-point gain in 3DMark06. And, as you'd expect, the Z835's SSD offers much faster read speeds than the 5,400RPM hard

	PCMARK VANTAGE	3DMARK06	BATTERY LIFE
<b>Toshiba Portege Z835</b> 1.4GHz Core i3-2367M, Intel HD Graphics 3000	5,894	3,601	5:49
<b>Lenovo IdeaPad U300s</b> 1.8GHz Core i7-2677M, Intel HD Graphics 3000	9,939	3,651	5:08
<b>ASUS Zenbook UX31</b> 1.7GHz Core i5-2557M, Intel HD Graphics 3000	10,508	4,209	5:41
<b>Acer Aspire Ultrabook S3</b> 1.6GHz Core i5-2467M, Intel HD Graphics 3000	5,367	3,221	4:11
<b>13-inch, 2011 MacBook Air</b> 1.7GHz Core i5-2557M, Intel HD Graphics 3000	9,484	4,223	5:32 Mac OS X 4:12 Windows
<b>Samsung Series 9</b> 1.7GHz Core i5-2537M, Intel HD Graphics 3000	7,582	2,240	4:20

The higher the score the better. For 3DMark06, the first number reflects score with GPU off, the second with it on.


drive that comes with the entry-level S3. In the disk benchmark ATTO, the Z835's mSATA drive managed read speeds that peaked just below 200 MB/s, while the S3 topped out at 80 MB/s reads.

For our part, the Z835 didn't get in our way while we worked (actually, it did sometimes, but that's a function of the obnoxious bloatware load, which we'll tell you about in a bit). During our testing, we carried on our normal routine of juggling tabs in Chrome, writing emails, reading blogs and streaming YouTube videos. The machine didn't hiccup, even when we started downloading and installing programs and running a full system scan in the background using Norton Internet Security. We did notice a slight lag as we opened a new tab while playing a web video, but other than that, multitasking was smooth.



Curiously, though, the Z835's solid-

state drive couldn't match the S3's HDD in write performance: it reached about 50 MB/s, whereas the S3 at least maxed out around 75 MB/s. Either way, the Z835's SSD isn't fast compared to other solid-state drives. The U300s, for instance, achieved 250 MB/s reads and 200 MB/s writes, while the UX31 remains the champion with 550 MB/s reads and 500 MB/s writes. Then there's one other area in which the S3 triumphs over the Z835, though, and that's resume time: the S3 takes just two seconds, whereas with the Z835 you'll wait four. Not a deal-breaker, though it does dovetail with some of the other ways in which the Z835's performance seems to trail the competition.

Additionally, it didn't take much to get that fan whirring. You might think that because it's tucked on the bottom side of the laptop any noise would be



... We're willing to bet that with a 23-second startup time, some of you won't fret too much about the raw performance scores.



muffled. Wrong. Even when coming out of hibernate mode the system piped up, and that noise continued even after we logged into Windows. The result, at least, is that the machine never got hot. Yes, the area above the keyboard gets warm to the touch (not that you'll touch it much anyway), but the keys themselves stayed nice and cool. Still, we'd be concerned about working in bed with the Z835, and having pillows or blankets wrap themselves around the vent on the bottom side, making it more difficult for the laptop to keep its surface temperatures under control.


So are these imperfections enough to justify spending an extra \$300 to \$500 on a higher-end Ultrabook? That's a question you'll have to answer for yourself. For some benchmark junkies reading this, they'll be a deal-breaker. But we're willing to bet that with a 23-second startup time, some of you won't fret too much about the raw performance scores.

### **Battery life**

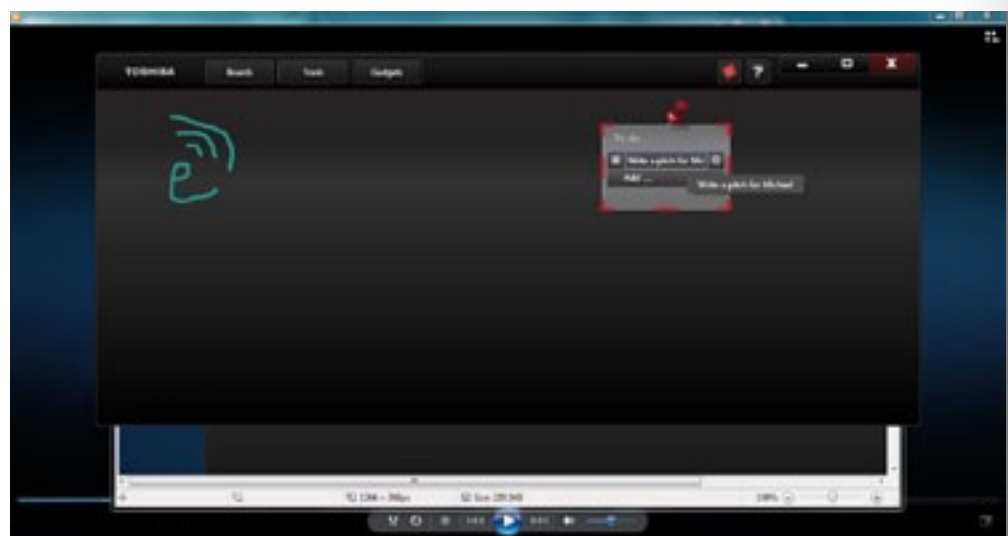
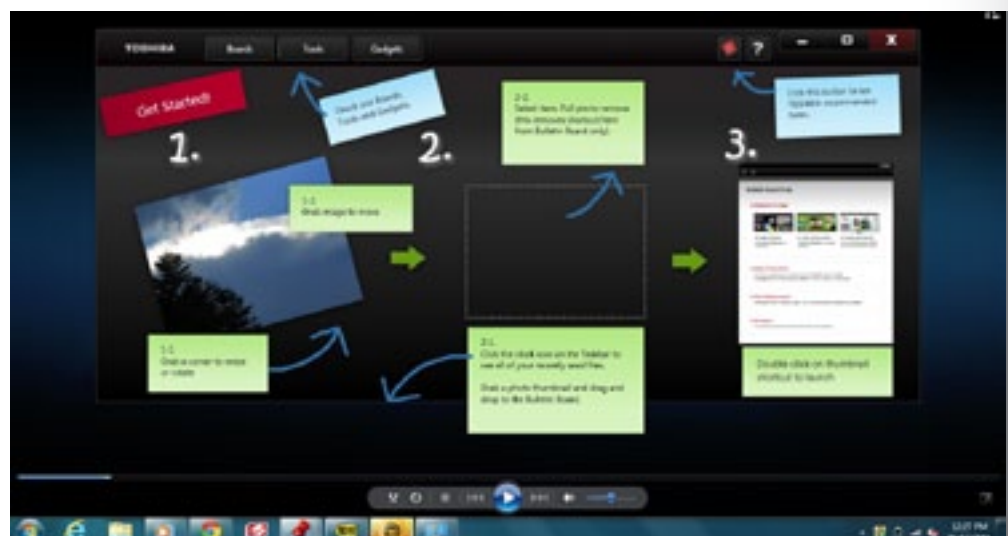
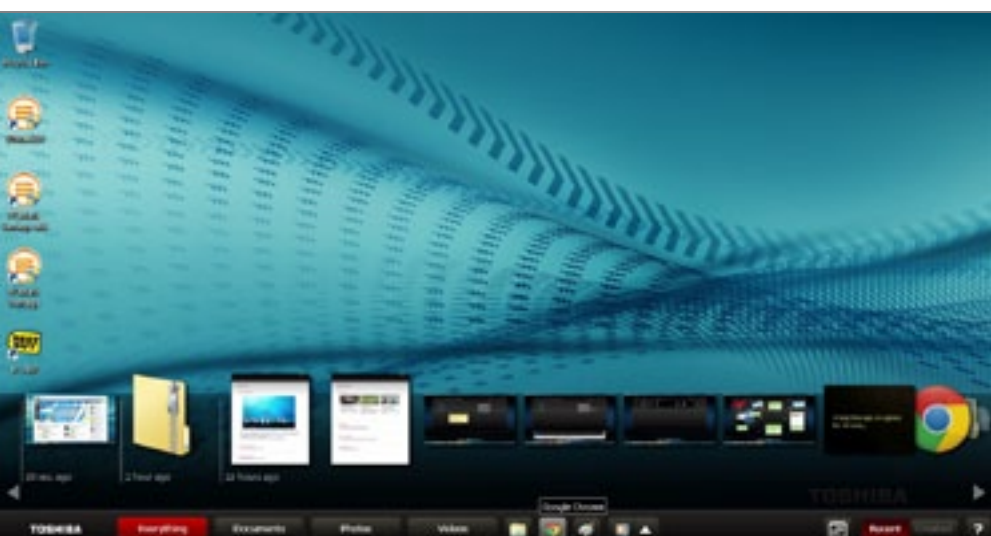
The best we've seen so far in an

Ultrabook — albeit by a margin of just eight minutes. In our rundown test, which involves looping a movie off the hard drive with WiFi on and the brightness fixed at 65 percent, it lasted five hours and 49 minutes. If you were to buy the identically priced Acer Aspire S3 you'd have to settle for an hour and 40 minutes less runtime (ditto, more or less, for the \$1,349 Samsung Series 9). Still, though it's technically the best, the Z835's longevity is comparable to the Zenbook UX31 and, to a lesser extent, the MacBook Air. Needless to say, we'll be curious to pit this against the HP Folio 13, which costs the same and is rated for nine hours of use. We know, we know: battery life ratings are often exaggerated bunk. That said, we wouldn't be too surprised if we soon had a new battery life champ.

This is probably a good place to explain that eco utility we mentioned earlier. Though it looks like a dashboard showing the display brightness and power consumption, in practice it's just a pre-configured battery-saving setting. So, if you enable eco mode, the keyboard backlight turns off, the display dims and the system will turn off the screen and hard disk sooner than it normally would. From what we can tell, it's an app dedicated to flipping on one particular power management profile: there are some advanced settings, but so far as we can tell, you can't adjust any of those metrics (at least not here — you'll of course get more choices in Windows Power Options). And though







it's interesting seeing the real-time graph illustrating the power consumption, we suspect that's not what most consumers will use this utility for.

## Software

Toshiba loaded the Z835 with bloatware, but in an interesting twist, most of it's software, the company wrote itself. These programs include: Toshiba Assist, Disc Creator, DVD Player, Face Recognition, Fingerprint Utility, HDD/SSD Alert, HDD Protection, HW Setup Utility, Media Controller, Password Utility, PC Health Monitor, Recover Disc Creator, Service Station, Security Assist, Sleep Utility, Value Added Package and the laptop's webcam software.

Among these apps is Bulletin Board, which Toshiba has been bundling on its laptops for some time now. With this

app, you get a canvas for posting to-do lists, sticky notes and a calendar widget, along with "written notes" (these will be about as legible as if you scribbled them in MS Paint). Any time you want to remove something from this hodgepodge of reminders, just drag the pin that's attaching it to the virtual board, and it'll fade away. It works well enough, though we can still think of some tweaks that would make the app more intuitive. First, Toshiba should pull in calendar entries from Google Cal and other services so that you don't have to manually enter appointments. Also, a local weather widget might be more useful than the analog clock currently included as an option.

Moving along, ReelTime opens a scrollable carousel showing your activity on the PC in chronological order. That



means apps you've used, documents you've opened and websites you've visited. We can see it being a handy way to pull up things you accidentally closed that perhaps didn't have a quick desktop shortcut. At the same time, though, we're not sure we'd get much use out of this, given that Windows 7 lets us pin key apps, docs and sites — not to mention the fact that most browsers let you reopen recently closed tabs.

Still with us? Good. Because we're not done yet. Toshiba also added Microsoft Office Starter 2010, Windows Live Essentials, Google Toolbar and Google Chrome — you know the stuff you're resigned to seeing on your spanking new laptop.

Worst of all, if you buy this through Best Buy, you'll be greeted by the retailer's own app store, which takes over most of the screen almost as soon as you start up. Actually, let's clarify that: you'll see the shop, along with a smaller overlay window that summarizes what the store is all about. (Spoiler: Best Buy wants to sell you stuff. Lots and lots of stuff.) You can remove this from your list of startup items, of course, but

the reality that this is what you get in exchange for scoring such an inexpensive Ultrabook is still quite frustrating. You know what they say: there's no such thing as a free lunch.

## Configuration options

The \$800 configuration we tested, the Z835, is a pre-built version that's only available at Best Buy. To recap, it comes stocked with a 1.4GHz Core i3-2367M processor, 4GB of RAM, a 128GB SSD and a eight-cell battery rated for more than eight hours of battery life.

The price goes up if you order through Toshiba's website, but at least the options expand — a little, anyway. Even here, you'll find pre-configured models, which means you won't have the option of cherry picking the processor or amount of pre-installed RAM. Starting at the low-end, there's the Z835-ST8305 (\$880 after instant savings), which comes with identical specs as the Best Buy model, except it costs eighty bucks more. Best Buy's bloatware aside, we can't see why you wouldn't go with the cheaper option.

Next in line is the Z830-S8301, a pre-configured model that rings in at \$1,200. It would seem here that you're paying 50 percent more for that 1.7GHz Core i5-2557M CPU, since this model, too, has 4GB of RAM, a 128GB SSD and integrated graphics. Kind of an outrageous price when you consider that the HP Folio starts at just \$900 with very similar specs. The most tricked-out model on display is the Z830-S8302, which

costs \$1,430 and is also pre-configured. For that chunk of cash, you get a Core i7-2667M CPU, 6GB of RAM, a 128GB SSD and integrated Intel graphics.

Okay, technically that's not the last configuration you can buy. There's also a configurable model, the Z830-BT8300, but with a starting price of \$1,100 and entry-level specs that include a Core i5 CPU, 2GB of RAM and a 128GB SSD, there's no reason for consumers to choose this option. Maybe that's the point: your only OS choices with that configuration are Win 7 Professional or Ultimate, which makes it pretty clear this particular model isn't for mainstream users.

## The competition

This is the part of the review where we usually weigh an Ultrabook against its competitors, all them imperfect in some way. The Z835 is no exception, though it does trump its opponents in several key categories. Its battery life is the best we've seen so far, though the ASUS Zenbook UX31 isn't far behind. It offers a more robust selection of ports than any other Ultrabook (save the HP Folio), and still manages to weigh roughly half a pound less than the others.

When it comes to specs, the Z835 loses a little bit of its shine now that we know what the Folio will be bringing when it goes on sale December 7th. Whereas the Z835 starts at \$800 with a Core 3 CPU, the Folio will go for \$900 and up with a Core i5 processor and a battery that purportedly lasts up to nine hours (we'll be the judge of that). Otherwise, they both have 128GB SSDs, back-

lit keyboards and 4GB of RAM. We'll break down the Folio's performance in our review, but for now, it's clear you can get more processing power at a small premium.

Still, the Z835 is a better deal than the \$900 Acer Aspire 3, which starts with no backlit keyboard and a slower 5,400RPM drive. It's no wonder it trails the others in all of our performance benchmarks.

With us so far? The Z835 is the lightest, most longevous Ultrabook we've seen. Now that we've got that squared away, here are some downsides: it's not offered with a 256GB SSD. By most metrics, it's not an extraordinarily fast performer. The Air, UX31 and U300s all combine an SSD with either a Core i5 or i7 processor and, as you'd expect, they eat the Z835 for breakfast. Then again, the 13-inch Air starts at \$1,299, while the UX31 and U300s start at about \$1,100. Seems fair to us, more expensive machines offering superior performance.

In terms of ergonomics, you'll find better keyboards and larger trackpads on the Air and U300s. Still, the Z835 isn't the worst in this area either: its keyboard is better than the UX31's and no worse than the S3's. Also, while its trackpad is nothing to write home about, it's still much more reliable than the UX31's.

And then there's design. On the one hand, to each his own. If you don't mind the Z835's buttoned-up look, ride off into the sunset with it and don't mind our nitpicking. We'll also say that the Z835's lightness helps make it pretty in a way that its shiny chrome accents




don't. In other words, industrial design includes more than just aesthetics. Still, we're inclined to say it's objectively less attractive than the Air, UX31 or U300s, each of which are striking in their own way.

### Wrap-up

We can only ding a laptop so much for being homely. Once you get past the Z835's dated looks (and you will as soon as you pick it up), it's actually among the best Ultrabooks we've seen. After all, it's earned a bunch of superlatives here: lightest, best battery life and most robust selection of ports (that one's a tie with the Folio). Not bad for \$800, especially considering many of its chief competitors cost three, if not five hundred dollars more.

If you'll indulge us in a game of devil's advocate, though, we can think of rea-

sons besides the design that you might think twice about this. So far, three competitors (the Air, U300s and UX31) perform markedly faster. Of those, the UX31 and Air each have higher-res displays. And while the Z835's keyboard and trackpad are adequate, the Air's and even the U300s' are better. Still, those seem like minor quibbles considering everything this laptop has to offer at this price. So, if you don't mind the design and dig the price and long battery life, carpe diem! No regrets, we say. And even if you don't take the bait, we suspect you'll soon be seeing more laptops like the Z835: after all, if Toshiba can pull it off, well, everyone else is just going to have to follow suit. 

*Bio: Dana Wollman is Reviews Editor at Engadget, a marathoner, lover of puns and a native Brooklynite.*

## BOTTOMLINE

Toshiba Portege Z830/Z835

\$800+

### PROS

- Aggressively priced
- Long battery life
- Lightweight, even for an Ultrabook
- Wide selection of ports, backlit keyboard

### CONS

- Performance trails other Ultrabooks
- Poor viewing angles
- Dated design, minor build quality issues

Lightest. Least expensive. Best selection of ports. There are tons of reasons to love this aggressively priced Ultrabook, though its dated design and so-so performance will turn off some shoppers.



*review*

# Samsung Galaxy Tab 7.0 Plus

BY TIM STEVENS

**We've already established** that the Galaxy Tab 10.1 is a great tablet. Then, just recently, we summarily found that the 1.2-inch smaller Galaxy Tab 8.9 is an even *better* tablet — at least for anyone who wants to take their slate places. So, following that logic, the even more petite Galaxy Tab 7.0 Plus should be the best of the three, right?

Not so fast. We've been here before, and things weren't exactly great. The

original Galaxy Tab was, of course, a 7-incher and wasn't universally well received thanks to a number of problems — the first being a \$600 MSRP. Another issue was an Android 2.2 build that tried its best but was ultimately ill-suited for tablet duties. This new 7-inch installment packs a dual-core 1.2GHz processor, a tablet-friendlier build of Android 3.2 Honeycomb and a somewhat more palatable \$400 price tag.



So, it's clearly better equipped than its predecessor, but that one shipped a whopping 12 months ago. How does the newer, fancier Tab compete in this newer, fancier present?

## Hardware

Samsung's last tablet really did look like a slate that was run through the wrong washing cycle and came out a size 8.9 rather than the 10.1 it started as. The 7.0 Plus, however, is a rather different beast, slotting in somewhere between the 8.9 and the Galaxy Note both in terms of styling and, of course, size.

It has the same faux-brushed metal backing that Samsung calls Metallic Gray — despite being far closer to black and not having a hint of sparkle.

And still being plastic. But, it does look cool and sophisticated and is far more pleasing to touch than the smooth plastic the company originally put on its 10.1. The non-removable back is perforated to allow the three megapixel camera and its LED flash to poke through, units that appear to be borrowed from the 8.9 and 10.1 that came before.

That is paired with a two megapixel camera on the front, peering through the top-right portion of the LCD's bezel when held in portrait. That's a very different location than on the other recent Tabs, which put the shooter front and center on the top when you're holding the tablet in landscape mode. Why the change? Well, the 7.0 Plus is aping some phone styling here, including a



gash in the bezel for a speaker and even a microphone on the bottom. The WiFi-only version we were sent of course doesn't support proper calling, and with Honeycomb it's clearly not meant to be a phone, but with Skype installed those looking to make some calls on a comically large celly are certainly welcome to do so here. The only thing missing is a proximity sensor to disable the screen — and maybe an invisibility cloak to hide your look of shame whilst holding a 7-inch slate to your face.

So this is a device intended to be held portrait-style, reinforced by Samsung putting its logo on one of the short sides rather than on the long side where it's typically found. This is again similar to the original 7-inch Galaxy Tab, which had its array of four capacitive touch buttons on the same, shorter side. No such buttons here — Honeycomb has of course nixed that — but the intent is still the same.

The physical buttons here are limited to power and a volume rocker, and are also in the same place as on the original Tab — on the upper-right side. However, slotted in beneath them on the same side is something new and interesting: an IR emitter. IR has long-since fallen out of favor as a means of intra-device communication, replaced by Bluetooth and NFC and the like, but it is still the mechanism of choice for controlling home entertainment systems, opening the door for the 7.0 Plus to be the biggest, beefiest Harmony there ever was.

The standard 3.5mm headphone jack

**... With Skype installed those looking to make some calls on a comically large celly are certainly welcome to do so here.**

is found up on the top, shifted to the right, but continue around to the left side of the device and you'll find something a little less common: a microSD slot. Through this you can easily add up to 32GB of storage for music or movies or whatever. Pick up the 3G version of this device and you'll also find a tray for a SIM slot.

Finally, on the bottom lies Samsung's proprietary 30-pin connector, flanked on both sides by two tiny little speakers that emit decent sound but at a maximum volume too low to be of much use in all but the quietest of small rooms. Connectivity options on this model include 802.11a/b/g/n at both 2.4 and 5GHz along with Bluetooth 3.0. The 3G model adds on 21Mbps HSPA+ (900, 1900 and 2100MHz) and quad-band EDGE/GPRS (850, 900, 1800 and 1900MHz).

## Display

While the Galaxy Tab 8.9, the increasingly mythical 7.7 and even the Galaxy Note manage to offer the full 1280 x 800 resolution offered by the big boy



10.1, the 7.0 Plus sadly is asked to make do with a measly 1024 x 600. That's the same as the original Galaxy Tab and, while we wish this device had the resolution to match its bigger (and even smaller) siblings, it is otherwise a very nice display. Colors are rich and bright, contrast is good and, while it can't quite deliver the sort of mouth-watering saturation that the company's Super AMOLED Plus panels can manage, color reproduction seems to be spot-on.

If the stock color temperature isn't to your liking, there are two others you can choose: Dynamic, which is a little too

over-saturated for our tastes, and Movie, which tones things down a bit. Whichever you choose you'll have a great looking picture that doesn't go bad even at extreme viewing angles.

**Performance and battery life**

The Galaxy Tab 7.0 Plus uses internals that are quite familiar at this point: a dual-core 1.2GHz processor paired with 1GB of RAM and either 16 or 32GB of storage. Unsurprising, then, that performance was also quite familiar. Despite being quite a bit smaller than the 10.1, this guy blazes through most tasks with similar aplomb. Apps launch promptly and flipping through and examining pictures in the gallery is as smooth as you like. The only occasional hiccups came into play on web browsing, where webpages periodically get a bit sticky and browsing becomes sporadically unresponsive. Disabling Flash helped—as it usually does—but out-of-the-box surfing wasn't quite all we'd hoped it would be.

BENCHMARK	GALAXY TAB 7.0 PLUS	T-MOBILE SPRINGBOARD / HUAWEI MEDIAPAD
Quadrant	2,700	1,871
Linpack	28.98 MFLOPS (single-thread) 69.47 MFLOPS (multi-thread)	46.22 MFLOPS (single-thread) 58.81 MFLOPS (multi-thread)
Nenamark 1	59.3 fps	43.2 fps
Nenamark 2	41.8 fps	27.9 fps
Vellamo	1,198	1,161
SunSpider 0.9.1	1,679	2,471

When we ran our usual spate of benchmarks, the results almost unanimously confirmed that this is indeed one speedy tablet. You'll see it bested the 7-inch T-Mobile Springboard (\$430 off contract) in almost every test, save for the single-thread version of Linpack. Meanwhile, the 7.0 Plus blitzed through the SunSpider benchmark with an average score of 1,679.

But it's in battery life that it really starts to pull away from the competition. In our rundown, which involves looping a movie off the tablet with WiFi on and the brightness fixed at 65 percent, it managed an impressive eight hours and nine minutes. That's really something when you consider the Springboard lasted just six and a half hours and the Acer Iconia Tab A100 came to a wheezing halt in less than five. And in case you're wondering, the 7.0 represents a marked improvement over the original Galaxy Tab, whose runtime was two hours shorter.

### Software

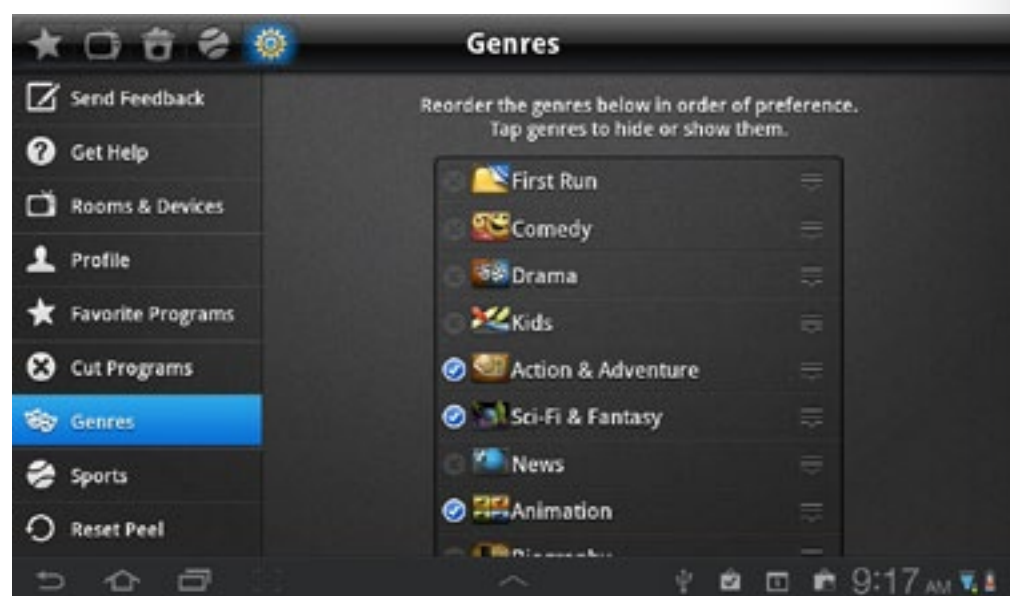
For the most part, the Galaxy Tab 7.0 Plus feels like any of the other Galaxy Tabs to use. It's running Android 3.2 Honeycomb, customized with Samsung's TouchWiz interface that adds a number of useful tools to the mix: a task manager, a world clock, a finger-friendly note-taking app, a calculator and a music player. They're all accessible by tapping on the little up-arrow at the bottom of the screen. TouchWiz also simplifies the look of Honeycomb

TABLET	BATTERY LIFE
Samsung Galaxy Tab 7.0 Plus	8:09
Apple iPad 2	10:26
Samsung Galaxy Tab 10.1	9:55
Apple iPad	9:33
HP TouchPad	8:33
Lenovo IdeaPad K1	8:20
Motorola Xoom	8:20
T-Mobile G-Slate	8:18
Lenovo ThinkPad Tablet	8:00
Archos 101	7:20
Archos 80 G9	7:06
RIM BlackBerry PlayBook	7:01
Acer Iconia Tab A500	6:55
T-Mobile Springboard (Huawei MediaPad)	6:34
Toshiba Thrive	6:25
Samsung Galaxy Tab	6:09
Velocity Micro Cruz T408	5:10
Acer Iconia Tab A100	4:54

a bit and adds some useful toggles to the settings menu that you get when tapping the wrench in the lower-right of the screen.

All standard fare, that, but the Plus does bring something new to the software table: the Peel Smart Remote app. The app typically requires a \$100 accessory to work but, thanks to the IR emitter built into the top of this guy, you can use it like a jumbo-sized universal remote control. To set up the app, you're basically





asked to turn off all your devices and sit somewhere in their general proximity. Rather than digging through endless lists of obscure product names as you struggle to remember whether you bought the Onkyo SR504 or sprung for the SR604, the Peel app just asks you to remember the brand of your device.

It then starts firing out IR commands with wild abandon, asking you after each one whether your device turned on. Once your TV or receiver or DVD player springs to life, happy day, you're configured! That said, if it never does, you're in trouble. The app automatically prompts you to email Peel's customer support and enter the particulars of your device, something we had to do for one of our recalcitrant receivers, and they were quite quick to respond.

This does cause problems in some cases, though. For example, we use a Harmony remote with a Nyko Blu-Wave IR receiver to control our PS3. That works great for media playback and navigating through the XMB, but there's no way to turn the console on or off with this. And, if you can't turn the device on, the Peel simply wants

nothing to do with it. So, watching movies on our PS3 was not something the Plus 7.0 will allow—at least with this app. But, we can't wait to see what other developers can do.

We also had problems with our TV, an older Sharp LCD that lacks discrete commands for its inputs. With the Harmony you can configure the remote to cycle through the available inputs as you switch from one activity to another. The Peel app, on the other hand, refuses to play nice.

So, you certainly lose some configurability with Peel compared to the Harmony platform, but it is a very easy to set up and use app, and once configured it makes finding things to watch a snap. The app asks what your favorite type of shows and movies are and it goes out of its way to help you find those things on live TV. You'll get an easy grid highlighting what's on. Tap anything you like and it'll take you directly to that channel.

You can also browse by genre and, in general, look at your TV listings in a whole new way. This is great if you often find yourself struggling to find something good to watch—bad if you're the



type who finds yourself idly sitting in front of the TV when you should be getting things done.

### The competition

Just who exactly is the Galaxy Tab 7.0 Plus trying to usurp? That's hard to tell, as the 7-inch slate category is still a bit under-served, but it's safe to say that this guy's strongest competition comes from its own big brother, the Galaxy Tab 8.9, which loses the IR emitter and microSD expansion but adds on a higher-resolution screen with a bit more room.

If you're squarely stuck on the 7-inch size, the T-Mobile Springboard is a solid competitor priced at just \$30 more off-contract and, for that money, offering 3G connectivity. Of course you'll have

to pay for data if you're hoping to take advantage of that, but anyone willing to sign on for a two-year contract will find themselves paying just \$180. We'd also be remiss if we didn't mention the Iconia Tab A100, which costs just \$330, though, again, that discount means you'll have to settle for considerably shorter battery life.

Stepping away from Honeycomb we have both the \$350 BlackBerry PlayBook, \$400 HTC Flyer (with Gingerbread), \$200 Kindle Fire and the \$249 Nook Tablet. The PlayBook and Fire are well-constructed but, with their angular shapes, a bit less comfortable to hold—they're heavier, too. RIM's tablet adds HDMI output to the mix, making it great for hosting boardroom presentations, while Ama-


zon's tablet offers an easy view into a very impressive collection of premium media, and of course costs just \$200. The Flyer adds stylus input to the mix, while the Nook Tablet is of course quite comparable to the Fire—just with a slightly more impressive set of specs and aesthetics.

### Wrap-up

The Galaxy Tab 7.0 Plus really is a gussied-up, slimmed-down, priced-right version of the original Galaxy Tab. If that tablet had released last year looking and feeling (and costing) like this one does it would have been a revolution. As it was it never found that level of success and, while the 7.0 Plus is definitely a far better device, it just doesn't have anything that makes it stand out among Samsung's increasingly busy selections.

The performance is good, the IR capabilities are a nice touch and the expandable storage will definitely tempt those

with a few extra microSD cards lying dormant. But, for just a little more money, the 8.9 feels like a much more comprehensive tablet and the 7.7, if it ever releases, will quickly make this guy obsolete with its 1280 x 800 Super AMOLED Plus display. And of course there's the Note, which can do proper double duty as a phone along with everything else the 7.0 Plus can do.

While the ideal size for a tablet is a personal decision, amid the increasingly chromatic scale of tablets Samsung is offering we can't help but feel the 7.0 Plus comes in just a little flat for our liking when compared with the almost pitch-perfect 8.9. That said, those looking for something a bit more portable will sing high praise for this 7-inch slate. 

*Tim Stevens is Editor-in-chief at Engadget, a lifelong gamer, a wanna-be racer, and a born Vermonter.*

## BOTTOMLINE

### SAMSUNG GALAXY TAB 7.0 PLUS

\$399

#### PROS

- Portable size
- Easily expandable storage
- Great performance and battery life
- Integrated IR emitter

#### CONS

- Screen res disappoints compared to other Galaxies
- Peel app has limited compatibility

The Galaxy Tab 7.0 Plus doesn't quite fill the footsteps of the larger 8.9 and 10.1, but is a great little slate in its own right.



## Ill-conceived **twitter** parody accounts



**@Garfie1ld** Fake Garfield

**Downfall:** Only so many jokes can be made about Mondays and lasagna

**Sample Tweet:**

Only lasagna can cure this [#caseofthemondays](#)



**@TheZuck** Fake Mark Zuckerberg

**Downfall:** Too similar to real Mark Zuckerberg.

**Sample Tweet:**

Doesn't [#twitter](#) suck today?



**@THENAMEHORACE** Fake Fat Kid from the 80's horror film *The Monster Squad*.

**Downfall:** Too obscure

**Sample Tweet:**

Remember that movie *The Monster Squad*? I'm in that! [#80s](#) [#monstersquad](#)



**@FreeiPacloc8tor** Not a parody! Company is giving away free iPads!

**Downfall:** Yeah right, I'm not falling for that again.

**Sample Tweet:**

Seriously click here for free iPads! [goo.gl/ORuLz](http://goo.gl/ORuLz)



**@Sh\*tmyGPSays** Sh\*t my Guinea Pig Says

**Downfall:** Guinea pigs say remarkably little.

**Sample Tweet:**

...<#>...



**@RichieRich7** Fake Richie Rich

**Downfall:** Dude is a jerk!

**Sample Tweet:**

My red carpet is literally made of money. Click here to donate to my Kickstarter <http://kck.st/k2xQ3Z>

*the last word - Box Brown*



<b>Editor-in-chief</b>	Tim Stevens
<b>Executive Editor, Distro</b>	Christopher Trout
<b>Executive Assistants, Distro</b>	Billy Steele, Jon Turi
<b>Managing Editor</b>	Darren Murph
<b>Senior Associate Editors</b>	Don Melanson / Brian Heater / Zach Honig Richard Lai / Michael Gorman
<b>Associate Editors</b>	Joe Pollicino / Sean Buckley / Joseph Volpe Terrence O'Brien / Amar Toor / Sharif Sakr
<b>Senior Mobile Editor</b>	Myriam Joire
<b>Contributing Mobile Editors</b>	Sean Cooper / Zachary Lutz / Brad Molen
<b>Senior HD Editor</b>	Richard Lawler
<b>Contributing HD Editor</b>	Ben Drawbaugh
<b>Reviews Editor</b>	Dana Wollman
<b>Contributing Editors</b>	Kevin Wong / Mat Smith / James Trew Daniel Cooper / Lydia Leavitt / Dante Cesa
<b>Senior Chinese Editor</b>	Andy Yang
<b>Media Producer</b>	Trent Wolbe
<b>Senior Columnist</b>	Ross Rubin / Michael Gartenberg
<b>Illustrators</b>	Box Brown / Dustin Harbin / Ed Piskor
<b>Editorial Director</b>	Joshua Fruhlinger

<b>APP Platform</b>	<b>AOL Mobile</b>
	Jeremy LaCroix / David Robinson
	Aaron Martin / Will Lipman / Candy Mayo
	Davy Reynolds / Brendan Dalton
<b>Product Managers</b>	David South / Luan Tran
<b>Developers</b>	Kyle Lu / Scott Tury / Mike Levine Ron Anderson / Terence Worley
<b>Architects</b>	Scott Tury / Todd Brannam
<b>Tech Leadership</b>	Bob Ward / Tarun Gaur / Larry Aasen
<b>QA</b>	Harry Bowen Jr. / Moncef Belyamani Basil Darwaza / Eileen Miller / James Baxter Scott Basham

<b>Sales</b>	Mandar Shinde / Alice Hawari
--------------	------------------------------



# engadget

Need real-time gadget and technology news? Download the official Engadget iPad app!

download engadget for iPad

The screenshot displays the Engadget iPad app interface. At the top, there's a search bar labeled "Search Engadget". Below it, a news feed shows several articles with images and headlines. The first article is about the Sony NEX-C3, Garmin Forerunner 110, and the Elgato Turbo.264 HD. The second article is about the iPhone 5 having 21Mbps HSPA+ data. The third article is about Dell confirming the XPS 14z will go on sale in the US. The fourth article is about iPhone 5 cases and realistic unibody dummies. The fifth article is about Kobo's Vox Android tablet. The sixth article is about Iceland getting a data center. Below the news feed, there's a "NOW PLAYING" section for the Engadget Podcast 246 - 07.01.2011. At the bottom, there's a navigation bar with icons for Home, Photos, Videos, Saved, Topics, Archives, Settings, and Podcasts.

1 HOUR AGO  
IRL: Sony NEX-C3, Garmin Forerunner 110 and the Elgato Turbo.264 HD

3 HOURS AGO  
iPhone 5 to have 21Mbps HSPA+ data? China Unicom says so

30 MINS AGO  
**Dell confirms XPS 14z will go on sale in the US in the 'coming weeks'**  
Remember that XPS 14z Dell teased at IFA? Yeah, well, it's arriving soon. As in, "the coming weeks" soon. The company just confirmed it's on the cusp of shipping here in the states, and while the outfit stopped short of giving a starting price, it's good and ready to talk specs. As we reported last month, it has the same industri...  
By Dana Wollman September 29, 2011 12:35PM

54 MINS AGO  
**iPhone 5 cases and realistic unibody dummy show off incredible slimness**  
While we're only five days away from finding out the true appearance of the next-generation iPhone, our good friends over at BENM.AT went ahead and crafted their very own unibody dummy using CAD drawings, CNC tools and a block of aluminum -- seriously, that's how they roll! Granted, this work's only based on...  
By Richard Lai September 29, 2011 12:13PM

1 HOUR AGO  
**Kobo's Vox Android tablet appears online briefly, gets Canadian release date and pricing**  
A day after another little-known e-reader manufacturer announced a tablet, a new Android slate from Kobo made a brief online appearance on Future Shop's site, only to be quickly taken down. According to the Canadian retailer, the FCC-approved tablet will offer up a 7-inch display with a 1024 x 600 resolution, WiF...  
By Brian Heater September 29, 2011 11:53AM

**Iceland gets a data center to call its own, still believes in fairies**  
You say Iceland, we immediately think Eyjafjallajökull -- and no, we haven't had a narcoleptic collapse upon these very keys. It's been over a year since that volcano swept the headlines and interrupted air travel, providing outsiders with a skewed

NOW PLAYING:  
Engadget Podcast 246 - 07.01.2011

Engadget Podcast 09.27.2011 Engadget Podcast 09.23.2011 257 Engadget Podcast 09.20.2011 Engadget Podcast 09.16.2011

e Home Photos Videos Saved Topics Archives Settings Podcasts